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ABSTRACT

Utilizing comments from teachers, professionals, college and high school students, this report is derived from the 5th Ned Hatathli Seminar, sponsored by the Navajo Health Authority, and presents factual information relative to American Indian participation in Indian Health careers. The following major speeches are presented: (1) "The Practice of Medicine in the Indian Community"; (2) "Papago Welcome" (emphasis on cultural responsiveness); (3) "American Indian and Health" (numerous problems defined); (4) "The Challenge of Indian Health Careers"; (5) "The Need for American Indians in Health Career Fields". Also presented are definitive summaries which detail the orientational and educational requirements of the following health careers: (1) Physical Therapy; (2) Speech and Hearing; (3) Occupational Therapist; (4) Vocational Evaluation in Rehabilitation; (5) Rehabilitation Counselor; (6) Alcohol Studies; (7) Allied Health Careers; (8) Social Work; (9) Medical Librarian; (10) Nutrition; (11) Gerontology; (12) Community Health Representative; (13) State Committees on Health Issues; (14) Pharmacy; (15) Nursing; (16) Veterinary Medicine; and (17) Medicine, Osteopathy, and Dentistry. The Seminar Evaluation is appended. (JC)

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INDIAN HEALTH CAREER HANDBOOK

and Report on

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FIFTH NED HATATHLI SEMINAR

for

Southern Arizona Indian Students

University of Arizona

Tucson, Arizona

February 6-7, 1975

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INDIAN HEALTH CAREER HANDBOOK

and

REPORT ON FIFTH NED HATATHLI SEMINAR

Sponsors:

Amerind Club, University of Arizona

University of Arizona

Navajo Health Authority

Hopi Health Profession Development Program

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Area Health Education Center
Health Education and Welfare
via Navajo Health Authority

Division of Health Manpower
Health Education and Welfare
via Hopi Health Profession Development Program

University of Arizona
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FOREWORD

Our American Indian students through their Amerind Club contribute substantially to university life in many areas. They have a record of developing programs which involve other students, faculty members, and the community-at-large. The Indian students provide excellent leadership for these activities. Our university faculty likewise has a fine record for providing assistance for this type of student leadership. This was recently evidenced by the heavy faculty involvement in the Fifth Ned Hatathli Seminar held on February 6-7, 1975, which was most successfully conducted by our Indian students.

I realize that the increasing university Indian student enrollment needs to be enlarged even more, so that it is truly representative of the Indian population in Arizona. However, our present students were most successful in heading the collaborative efforts of the university, the Navajo Health Authority, and the Hopi Health Professions Development Program in bringing hundreds of Arizona Indian high school students to this campus. I am delighted that the Ned Hatathli Seminar attracted 327 participants this year. This seminar exemplified the best sort of university-community relations with the Indians of Arizona. This augurs well for the university and the state.

Thanks in large measure to the Amerind Club, the University of Arizona has been able to demonstrate a flexibility whereby its educational system can adapt itself to the needs of Arizona's original inhabitants. Although our services to the Indians are indeed increasing, we have a long way to go. They are really just beginning.

John P. Schaefer
President, University of Arizona

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ACKNOWLEDGMENTS

The cooperation between faculty from many departments and students to conduct this seminar was outstanding but typical of the University of Arizona.

Student leadership on this campus supported by faculty led to success. Mr. Emmett Francis should be recognized for efforts to develop an agenda while completing his master's program. Mr. Arnold Taylor, also developing his master's research, spent hours and hours, days on end, as a most competent and patient executive chairman.

Mr. Robert Svob, Dean of Students, is to be commended for supportiveness through personnel, supplies, and space. Mrs. Norma Mansell's tireless service in typing, editing, organizing, and keeping records was basic to success, and the total secretarial pool in the Dean of Student's office became involved, but Mrs. Betty Hubert deserves special mention for assisting Mrs. Mansell.

Campus tours guided by Mr. Lou Ennis, Assistant Dean of Students, consisted of about seven students; and Mr. Ennis was, characteristically, most patient about some confusion regarding schedules.

Dr. Robert Garrett of the Student Health Center and Mr. Roger O'Mara, Director of State and Community Resources, representing Vice President Marvin D. Johnson, carried out all the details of housing, food, greetings and hospitality--a terrific logistic feat involving numerous staff and 327 students over a two-day period.

Mr. Jack Jackson, Director of Student Affairs; Mr. Anslem Roanhorse, Assistant Director, Office of Student Affairs; and Mr. Julius Pete, Counselor, of the Navajo Health Authority, as well as Mr. Joe Henery, Counselor; and Mr. Dick Spinning, Counselor, Hopi Health Professions Development Program were in close consultation with the campus committee, and came early to assist with the last minute "nitty gritty," as did Mr. Reuben Howard, hospital administrative facilitator.

Mr. Marvin Johnson, Vice President for University Relations, made buses available and appeared to greet the seminar participants at the opening session.

At the outset, Professor Jay Stauss and Chairman Arnold Taylor conferred with President John Schaefer who expressed supportive interest and made discretionary funds available for needed supplies. This administrative support was most important.

The following lists indicate many other participants, each deserving a special mention:

GENERAL COMMITTEE

Students

Martha Austin
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Jerry Curley
Larry Curley
Emmett Francis
Ernie Quiroga
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Dr. Jay Stauss

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Advisors:
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Mr. Anslem Roanhorse, College Counselor

Hopi Health Professions Development Program

Mr. Kenneth Patch, Director
Mr. Joe Henery, College Counselor
Mr. Dick Spinning, College Counselor

FACILITATORS
of
Health Careers Mini Seminars

1. HEALTH SERVICES ADMINISTRATION

   Mr. Reuben Howard, RN, graduate student in hospital administration
   Dr. Theodore H. Koff, Associate Professor in Public Administration (Health)
   Ms. Holle Weiss, Research Assistant in Public Administration (Health)

2. SOCIAL WORK CAREERS (includes gerontology)

   Ms. Betty Bitsue, RN and social worker in Chinle Extended Care Center
   Mr. Larry Curley, graduate student in gerontology
   Ms. Angelita Miguel, health educator with United States Public Health Service
   Mr. Ron Moore, Hopi representative to State Committee for Aging

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3. MEDICAL, OSTEOPATHIC AND DENTAL

Dr. Herbert K. Abrams, Family & Community Medicine
Dr. Steven S. Spencer, Family & Community Medicine
Ms. Vikki Stevens, medical student

4. NURSING AND MEDICAL LIBRARIAN

Dr. Agnes Aamodt, Associate Professor, College of Nursing
Ms. Patricia Bradley, Medical Librarian, Navajo Health Authority
Ms. Trudi Narum, student in nursing

5. REHABILITATION AND MENTAL HEALTH - Student Union 280
(including: a. physical and occupational therapy
b. speech therapy)

Dr. Paul Leung, Associate Professor in Rehabilitation
Mr. Jerome DeWolfe, Graduate student--Alcohol Studies
Graduate students: Lisa Butters
Ellen Geftner
Joan Miller
Dick Veldy
Mike Wingate

6. NUTRITION AND DIETETICS CAREERS - Student Union 353

Dr. Edward T. Sheehan, Associate Professor in School of Home Economics

7. PHARMACEUTICAL CAREERS - Student Union 284

Mr. Richard Draper, Health Education and Welfare, Chinle Health Center
Mr. Howard J. Eng, Assistant to the Dean, College of Pharmacy

8. VETERINARY MEDICINE - Student Union 282

Dr. Tom Baumgardner, DVM, Extension Veterinarian, Navajo Reservation
Dr. Edward J. Bicknell, Animal Pathologist, Veterinary Science
Dr. Ted Noon, DVM, Assistant Animal Pathologist, Veterinary Science

9. ALLIED HEALTH AND OPTICAL SCIENCE - Student Union 355

Mr. Donald Paris, Director, Division of Health Sciences, Pima College

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FOR YOU

A Personal Message for YOU, the Student:

You are in high school and you are finding athletic events exciting; you are discovering some intellectual interests in your studies, and you spend a lot of time "rapping" with one another. Sometimes you wonder about your future.

Most of you will choose to continue some training after you graduate from high school. You will be preparing to earn a living and you plan to get to a job that pays well. At the same time, you want a job that means you are of service to others.

As you work with your counselor to select your high school curriculum be sure not to box yourself in with easy courses. The harder courses are probably the ones that give you a strong background so that you have more choices about professions. You need solid courses over your four years of high school in English, mathematics and sciences if you plan to continue in careers of the health professions.

You must, of course, examine the entire field of careers and try to get into an area that fits your interest and abilities. If that selection process should lead you to the careers relating to improving health or healing the sick, you should be conscious of the great need in Indian communities for Indian professionals. The main speeches in this handbook all say that YOU are needed.

If you are at all uneasy about your career choice, feel free to contact any of the following:

Mr. Anslem Roanhorse
College Counselor
Navajo Health Authority
P.O. Box 643
Window Rock, Arizona 86515

Mr. Joe Henery or Mr. Dick Spinning
Hopi Health Professions Development Program
P.O. Box 123
Oraibi, Arizona 86039

Mrs. Arline B. Hobson
Indian Student Advisor
University of Arizona
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INTRODUCTION AND HISTORY

of the

Navajo Health Authority

Ned Hatathli American Indian Student Seminars

The Fifth Ned Hatathli Seminar

History of the Navajo Health Authority

In June, 1972, as a result of the President's report to the nation on the need for improvement on Indian health conditions, the Navajo Health Authority was created by the Navajo Tribal Council. Its stated purpose is developing comprehensive health education for the Navajo Nation, including the future American Indian Medical school. Tribal as well as federal funds were committed to the development of the Navajo Health Authority.

The major thrust of NHA is to develop Indian-health manpower through recruitment to formal collegiate and graduate programs and through initiation of programs in medicine, nursing and allied health sciences on the Navajo Reservation. Significant progress was made in generating training programs and in supporting existing programs.

The Office of Student Affairs was conceived primarily to attract Navajo Indian students into entering health-related professions. Once a student identifies his motivation, interest, desire, and goal, the office utilizes its resources to provide counseling services and health-care information. It also coordinates available financial resources for health-career scholarships.

History of the Ned Hatathli American Indian Student Seminar

The NHA, in commemoration of one of its original commissioners, Dr. Ned Hatathli, established the student seminar series. The main focus of the seminar series is on health-professions education. Each seminar invites a number of high school and college Indian students currently enrolled or planning to enroll in health-profession career programs. The meetings offer an opportunity to exchange information on problems and progress of the students, and to share ideas with outstanding health professionals.

Ned Hatathli spent his early school years at Tuba City Boarding School. After his brief term in the Navy, he entered Haskell Institute before enrolling at Northern Arizona University in Flagstaff, where he received his BS degree in 1949. Dr. Hatathli was honored by the University of Michigan with an honorary Doctor of Law degree in 1971, and was also the recipient of Indian Achievement Award that same year.

Dr. Ned Hatathli served in various capacities after his return from college to the Navajo Nation. In 1967, he accepted the position of Education

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Specialist with B.I.A. before he was offered a position with the newly created Navajo Community College. He served both as Executive Vice President of the college and President of N.C.C.

Throughout his life, Dr. Hatathli strived to develop sound education systems, and educational opportunities for Navajo youth. His greatest achievement is probably something he never lived to see completed--the creation of a permanent facility for N.C.C. He devoted an enormous amount of time toward establishing the first Indian-owned and Indian-operated college, but only lived within a few months of seeing his childhood dream dedicated. Dr. Ned Hatathli died an accidental death in October, 1972.

History of the Fifth Ned Hatathli Seminar

At the request of the Navajo Health Authority in the autumn of 1974 a committee of students, faculty, and community was assembled to discuss a Health Careers Seminar on the University of Arizona campus using Navajo Health Authority funds. The community members who agreed to serve did not continue to be responsive but the faculty-student rapport was excellent. Mr. Arnold Taylor, a graduate student, was selected as the General Chairman, and various student-faculty sub-groups assumed responsibility for such details as agenda, logistics, publicity.

Mr. Jack Jackson, Director of Student Affairs of the Navajo Health Authority, and his assistant, Mr. Anslem Roanhorse, met with the committee on several occasions.

The committee emphasized a concern that Indian students conceptualize the total health-delivery system with all the possible careers.

Dr. Jay Stauss cooperated with Arline Hobson, Indian Student Advisor, to establish a working group of students to assist in conducting the seminar and the final report. The students received academic credit for this learning experience.

Counselors in the Hopi Health Development Professions learned about the plans and offered enthusiastic support, arranging for additional needed funding, recruiting for participants, and funding participants outside the Southern Arizona area.

The following report captures the major focus of our seminar. We have tried to summarize and be brief where possible without changing what people said. We know that all too often final reports are of little or no use to anyone. On the contrary, we feel this report has much to offer. The major speeches are inciting and provide a challenge to all of us involved in health careers for American Indian youth, and especially Indian youth themselves. We hope this challenge is met. Also, the report is packed with factual information about many different health careers. We do not pretend that we covered them all but we offer more information than usual, and perhaps a different perspective. We have comments from teachers, professionals, and students, Indian and non-Indian. We urge that you share these comments with students who were unable to attend, your colleagues and other interested persons.

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THE PRACTICE OF MEDICINE IN THE INDIAN COMMUNITY
by
Dr. Taylor McKenzie
Executive Director of Navajo Health Authority

I see a number of people that I know very well; I'd like to recognize Dr. Shaw, Dr. Abrams, and Dr. Spencer. Dr. Shaw's being [illegible] reminds me of the time that I decided to become a doctor. I finished [illegible] undergraduate work, applied to--was accepted--and graduated from Baylor University College of Medicine in Houston, Texas. Then I went to Michigan to do my internship. Internship is the year after one has finished medical school and begins to practice medicine under the supervision of older and more experienced doctors. I happened to be on night call, and in those days when you took night call you worked 24 hours a day every third night. I was on call that one evening and somebody said that Dr. Shaw was here to see me. This was in Pontiac, Michigan, and so I went down from the surgery floor and met Dr. Shaw. Dr. Shaw, at that time, was director of Indian Health and he was there to ask me to come and join the Indian Health Service, to return to it on the Navajo Reservation and to practice medicine, which I later did.

I wasn't quite ready to come back, however, because I felt that I needed to get more training; so I put in four more years before I returned to the reservation as a physician. One wonders what one should do when one is in training. There are different kinds of doctors, you know. I know that many of you come from reservations and Indian communities where you have medicine men. On the Navajo Reservation medicine men have their specialties. Once you become a medicine man you specialize in a particular ceremony. You are known for that and you get referrals for that kind of service. You could be a specialist of this kind, or a specialist of that kind of ceremony of healing, very much like in western medicine. Well, I specialized in surgery; there are people who specialized in the care of children--we call them pediatricians. There are people who specialize in the care of women, called gynecologists. People who specialize in the care of women who are going to have children are called obstetricians. Doctors who like to cut up people and repair them, we call surgeons. If you specialize in taking care of people who have had head injuries or something wrong with the brain, we call them neurosurgeons. People who want to specialize in taking care of the ear we call otologists, and so on.

Medicine men are the same way. They have their own specialties and they excel in a particular ceremony. One of the things that I particularly want to make you aware of is that you know once you have gotten into the field of medicine (as I imagine to be true in any field) and once you have demonstrated to yourself that you're able to do these things, you will know the confidence that comes right with it. One of the things that I really like about being a doctor is that I can talk to another doctor or a specialist or a group of doctors, and we can talk shop. You know we talk the same language and I understand them and they understand me. It's really remarkable and it's exhilarating. One of the things that doctors have to learn to do is to continue to learn once they become doctors. You have to keep learning even if you have an M.D. and you've finished all of your training. So many things are being discovered, you know. Each new discovery is a new advance in medicine. It is very important to continue to learn new things that have been found.

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When you graduate, people that you've gone to school with and people that have instructed you are going to stand up before you and congratulate you that day and say, "Commencement is only the beginning." Now, go back this evening and look in the dictionary and find out what the word "commencement" means. It means "the beginning." There are too many things in this world that we don't know, that you need to know and that I need to know. We need to continue to learn and read and study whatever field you get into. It's very important, otherwise you'd become stale.

Being a physician is really a great deal of fun. I'm not sorry that I went into medicine; and I'm not sorry that I went into surgery. You know I don't look at surgery or medicine the same way that you might look at medicine. I don't look at surgery or whatever specialty through the eyes of Dr. Gannon or any other TV artist. But, nonetheless, I'm excited about medicine in a different way. We hear about heart transplants and kidney transplants. We hear about bone surgery and eye surgery. I think I can stand here before you and say to you that I have been in almost any one of those different kinds of surgical procedures. I practiced medicine until about six months ago; right now I'm an administrator and I do miss practicing medicine. One of the things that overwhelms me is that I have been through some of these very exciting activities, learning how to do those things; it overwhelms me that I am an Indian and have had an opportunity to do those kinds of things. I can fix up sick people, get them well, and send them home. That is one of the challenges and one of the real joys of medicine. That is why I think it's so important for you as Indian students, as Indian young people, to know about the needs of your own people at home.

You may be in a reservation setting just like I was, not having the advantages or all the benefits of "modern society" as you might call it. I would hesitate to call it modern. I think we should call it Western because when we say modern I think our people would say, "What makes you think that your own way of life is any less modern than the Western way of life?" Be that as it may, I know that you as Indian students, apparently not having the benefits of the advantages of Western society, still have an opportunity and still have the innate ability to get into any one of these specialized fields and excel if you want to. It's even more urgent and encumbent upon you to take up the challenge.

If you would look at the statistics, as President Nixon acknowledges, you would learn that the health of the American Indian people is about 20 to 25 years behind current times. There are many reasons for it. One is manpower shortages and that is why I hope you're here, so that we can convince you to go into the field of health, either as a nurse, a physician, an emergency medical technician, pharmacist, dentist, whatever, because you're needed on the reservation. I don't like to talk about it, but I think it needs to be said, that in these United States there are somewhere between 38 and 50 American Indian physicians.

Out of that group until very recently, this speaker was the only American Indian physician practicing on an Indian reservation. That doesn't say very much, does it? I think it is so important for you to remember that the health needs of Indian people are so great and that you, as young people, have the energy, the inquisitiveness, and the youth to get into this kind of thing and return to your people to give them the kind of help

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they need. I hope that I don't have to say that much longer--maybe another year or two or something like that--because we have some Navajos in medical school now. In two, three or four years they'll be out. Pretty soon we'll talk about two Navajo doctors on the Navajo Reservation, then three, four, five; then perhaps we'll hear of one or two on the Papago Reservation and one or two on the Apache Reservation. I'd like to think that this kind of trend is going to swell, you know, pick up its momentum and just keep improving and improving until someday the level of health care for American Indian people will be at the same level as the rest of the community in these United States. Those are some of the things that I wanted to talk about.

One of the questions that I'm frequently asked is, "Why did you become a physician?" Many things cause people to make decisions and some of the things may be completely unrelated. Some of you, I hope, may want to become a doctor because today you heard an Indian physician speak. I'm not counting on that; some of you are going to decide to become a physician because you've had a particularly bad experience back at home which may be completely unrelated as to why you should decide to become a physician. There is a lot of other psychology and maybe a bit of psychiatry to explain reasons for becoming a physician. You know I'm happiest and I feel the most secure and confident, when I'm in an automobile and I'm doing the driving. I don't like to ride airplanes because I'm not flying the plane. I'm just shut up in that tube that hurtles through the sky; I'm not at the controls and I don't know what's going to happen. Maybe that's why I like surgery. Because as a surgeon, I'm supposed to be in charge of an operation and the surgical team. You know exactly what's going to happen and what you want to do next. I think this may be a psychological study. I don't care who it is who wants to go into medicine or dentistry; the reason for the decision to do such and such has a bit of psychology behind it. My mother got sick one time, very, very sick, and I thought she was going to die. This was on the reservation. If you've ever had someone on their death bed right in front of you and you don't know what to do, it's a completely helpless feeling. There is a patient there in front of you dying. You don't know what to do. So I resolved to remedy that situation. The next time something like that would happen to me I would know what to do. That was one of my very early milestones in my decision making, I believe.

I used to go down to the local Indian hospital in the early days. The physicians that were sent to the reservation I observed and studied. I'd listen very carefully. I remember those people. They would be called in for an emergency; I remember one physician that came in on a weekend when he was called for an emergency; and he didn't know what was going on. He thought he was having a day off and that he was having a good time; when he came into the hospital he was not fit to take care of the patients. That was one. On another occasion that I observed, I was sitting in the waiting room at the time an obstetrical emergency arose. This was on a weekday. The hospital was unattended. They had to dispatch a vehicle to fetch the physician, and when he came in he did not look like a physician at all. He had boots on. He'd obviously been in the mud, probably taking care of his farm or little garden, or whatever. His shirt was dirty. This is one of the things that I observed at that time, telling me that if these people are not going to care enough to take care of people in an appropriate manner, then who else is going to do it. And that was one of the points that helped me to decide that maybe I should become a physician. The situation isn't

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much better, however, after all these years. Many physicians now on Indian reservations don't look like physicians at all in the clinic. I will wager this, though, that when they set up their own practice, they'll begin to look like physicians after they've left the reservation. So, these are the kinds of things that went through my mind and were important experiences.

I think perhaps one of the most important reasons was that there were not enough physicians. People would come to the hospital to be put into a bed and then to die. So to this day, the Navajo people still continue to have a kind of reservation about going to a hospital, because to them, going to a hospital means that you are going to die. Even in the present day there are certain rooms in a hospital that a patient doesn't want to be put into because when you get put into that particular hospital room that means you're seriously ill and you are going to die. These are the kinds of feelings that Indian people have about medicine.

I finally decided I would try to become a physician and I then went through high school and talked to my teachers and instructors in high school and asked them what I needed to do before I got there, to get ready to go into medicine. I think it's a good thing that I asked them because I would not have been prepared otherwise. They told me that I had to become proficient in mathematics, physics, and the various sciences. When I got to college I asked what I needed to do if I wanted to become a physician. The counselor said to me,"You need to take these subjects, and then if you take those subjects after the third year of college you can go to medical school if you are accepted." While I could have gone to medical school after the third year of college, I decided that I should get my degree before going to medical school and so I did that.

One of the things that I decided to do because there was always the ever present danger, the very real, practical, nine chances-out-of-ten that I would not be accepted to medical school, was not to go in as a premedical student. You have to be very careful because the premedical major is a very limited field. If you don't get into medical school then what are you going to do with your premedicine major? I talked to my counselors about this, and I decided to play it cool, if I could. I declared a chemistry major so that in case I was not accepted into medical school, I could always go on in chemistry. I could come back to the reservation and teach chemistry or I could become a technician some where, or I could get an advanced degree in chemistry. So if you're interested in medicine or any of those fields, where a restricted curriculum is offered, I would advise you very much not to take that but give yourself enough of a background, that in case you're not accepted into nursing, or dentistry or to medical school you still have a background to do something else. I think that is very, very important. I would also advise that if you come to college and you declare a premedicine major and should you not make it into medical school it would be a tremendous moral letdown. I think you need to guard yourself against that very, very much, because it's a tragedy to throw everything away at such an early life.

One of the things that I had to do was to consider my ethnic origins. American Indian youth today have a tremendous hangup about their ethnicity. Let me relate a little of my experience to you. I learned to speak the Navajo language very early and I was quite fluent in it. I spoke it through

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school, high school and when I got to college I found it very difficult to concentrate because in college there's a great deal of homework and writing and I found myself trying to think things out in Navajo. If you've ever studied the Navajo language, you will know that the thought processes are completely opposite those of English. Consequently, in my first year, I didn't do very well. So I had to make a tremendous, concentrated effort to keep the Navajo thought process out so that I could get my studies done. I didn't find it much of a disadvantage because when I got back (though I had difficulty speaking Navajo at first, and I think I'm doing a little bit better now), I was able to pick it up again and start right where I left off. I'm not saying that you should forget your language or your culture, but I'm saying just don't let it be such a tremendous hangup that you can't get your work done.

In school you've got instructors, many of whom are very considerate. If you've got a question or a problem, take a few minutes out and discuss it with them and get it over with. I think that that's one of the things that you will discover as you go to school. One of the things that might get you into trouble, if you have a tremendous hangup about your ethnicity, is that you're going to have trouble going to individuals asking for help. I don't think that there is any reason for that. You'll always have your ethnic origins. You'll all have your cultural backgrounds. It will never leave you despite the rhetoric among Indian youth today. If I took an individual who is an Indian and put him here to be examined in every detail, you will find an Indian is an Indian right from the genes on up. Your ancestry is Indian; your genes and your genetic makeup is Indian, and nobody can change that. I really don't think that this should be a tremendous hangup with young kids because it may be an obstacle for you to become a physician, a dentist, a nurse, or whatever. Some day, when you become a physician or a dentist or one of the things, you will discover that you are as good as anyone else in this country. You can do the specialized procedures. As a matter of fact Indian people are noted for their dexterity with their hands. I'm not saying that all of your can go into surgery, because I might lose my job to you, but Indians are known for their dexterity with their hands and I kind of thought of that when I went into surgery. Look at the Fairchild Corporation's operations in Shiprock, New Mexico. The Indian women who put these minute pieces of equipment together are hired for their manual dexterity. Look at the jewelry work of Indian people and the rug work. That speaks for manual dexterity--not only dexterity but imagination as well. If you have imagination, chances are pretty good that you will excel in whatever intellectual endeavor you start on.

As I went on through college, I happened to be blessed with a certain capability and I participated on the track team in high school and college, and was able to participate in some of the major track and cross country events throughout this country. That kind of activity should not be a hindrance to the kind of things that you want to do. If you want to go into medicine you should keep yourself and your interests broad enough so that you don't become a bore in your particular field. Try to do the kinds of things that keep your interest alive.

When I decided to go to medical school, I had written to about three institutions and I was accepted at two of them but Baylor College of Medicine was a small school with a class of about 80, and I particularly wanted a small school because I knew I would need help. Where you have a

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class of about 150 or 200 medical students, the professors do not have enough time to give you the kind of attention that you might need. So I picked a small school and I certainly did need help. I asked for it. I was not ashamed to ask for it, and I received some help. While I was not the brightest student, I did not blaze any trails in medical school, but I can honestly tell you that as an Indian I was not the dumbest, either. So, I felt that I was in the mainstream of the medical community of this country. I could go anywhere and attend a surgical meeting and just be completely involved in discussion because those were the things that I was interested in and part of the work that I do. You can do the same thing.

When I went to high school a lot of people would say, "Gee, you must be a brain to go to medical school." The truth of the matter is that I was a "B" student in high school, okay. And a "B" student in college and the medical school that I went to probably made some leeway, because at that time medical school was only taking "A" students. But I went to that school as a "B" student--not even a "B+" student, I might add. With the help that I received plus the fact that I knew that I was the only Navajo and probably the only Indian in medical school at that time, I found it necessary to burn the midnight oil. Four years after I entered medical school I came away with an M.D. degree.

One of the things that had always intrigued me, and I looked forward to it with great anticipation and excitement, was to be able to do a history and a physical examination all in the Navajo language. When I came back to the reservation I was assigned to the Kayenta Health Center. This is a remote area on the Navajo Reservation. I came in at an odd time. Usually the government works from July to July as their operating year but I'd come back and I applied in the middle of the year. I was assigned to the Kayenta Health Center as a general medical officer, until a surgical position could be freed up. I spent seven months there, which was one of the most enjoyable periods of my life, because as a surgical resident and as an intern for a period of five years I worked in the hospital 24 hours a day every third night. When I went to Kayenta and my hours changed from 8:00 to 5:00--and I was on every other weekend--it was a tremendous change and I got a great deal of rest. I gained a little weight, was able to go exploring on the Navajo Reservation--something that I'd never been able to do because I was so involved in getting this medical degree. That gave me a period of seven months when I could just kind of sit back and do out-patient work. Whenever I had the free time I would jump in the car with my family, and I would ride to some point on the reservation just to get reacquainted with the reservation.

After the seven months were up, we moved to Tuba City, Arizona, and then to Shiprock as surgeon in those two places. It was quite exciting. It was considerably busier. As a matter of fact, it got even worse than my residency because now I was the only surgeon in the area, and if something happened I was there 24 hours a day. I'd get calls maybe one night, and get calls maybe the next night, and it went on and on like that. But it was a happy time.

I came back to the reservation and I did a history and physical in the Navajo language and I think one of the things that I'd always dreamed about

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was to treat a Navajo patient in the Navajo language. And I'm still doing that today. It was a little difficult at first, because I had to relearn the language a little and made some bad remarks. Sometimes, if you don't say Navajo correctly you might say something that is very embarrassing. Some of the doctors, you know, they try to learn the Navajo language in the two years that they are on the reservation; and sometimes they say funny things when they try to speak Navajo. One time in Tuba City a nurse wanted to learn how to say, "Have you had a bowel movement?" The Navajo people spent hours with her. She said it over and over because she had to handle bedpans, and she wanted to be able to ask in the Navajo if they'd had a bowel movement so she could take the bedpan away. She got it down perfect, and we coached her for two or three days. Then she decided she would try it. She went into the patient's room, and she was going to ask the patient if she'd had a bowel movement. Instead, it came out, "Did I have a bowel movement?"

Doctors get into that kind of trouble too. I remember one physician who came in who was learning the Navajo language and was doing very well; I thought he was almost as good as the Navajos in speaking the Navajo language. He got to know the people in the community fairly well. He came in and he recognized a family sitting in the emergency room and he recognized them as a family of a patient in the hospital, an elderly man. So he decided that he would ask them a question, and he said, "Well, did you get to see your father?" The family members started to snicker and laugh, and he was puzzled. He asked, "What's the matter? Did I say that wrong?" They said, "Yes." "Well then, what did I say?" "Well, Doctor," he said, "you said, 'Is your father pregnant?'" Well, I imagine that in my effort to relearn the Navajo language I did pull a few of those.

I'm the only Navajo practicing on the reservation as a physician. It has its advantages, because you know I came back to the reservation and it's a completely new area. Anglo physicians, notwithstanding, have their own difficulties, you know, of language and cultural problems, so that they can't really mix in and get really involved in the Indian culture. So I came back to a completely new field with the kinds of things that could be learned by only an Indian physician. You discover new things. One of the things that I came back to do was to see if the things I learned back in Pontiac, Michigan, could apply back here on the reservation. There are many areas in which the things that I learned at Pontiac do not apply on the Navajo Reservation.

When you're in training, you look up to an instructor and you take in everything he says. You never question when an instructor tells you something. You know that he could be wrong, or instructors may actually tell an untruth to classes. Be that as it may, you know one of the things that I wanted to do was to test some of the things that my teacher and surgeon taught me. Some of the things that they teach you are taught as laws, just as though it's God's word that something has to be done in such and such a way. I put a few of those to the test and I discovered that some of them are not laws at all, but individual biases, particularly in surgical procedure, surgical techniques, treatments, and so on. But I'm not going to go back and tell my instructors that I have disproved what they taught me.

I know some Indian people who have nothing to do with the Navajo religion. They are very straightforward and maybe they are Christians, Catholics, or whatever; but they have nothing to do with the Navajo religion. I've discovered that some of the Navajo who refuse to become involved in their own religions, may continue anyway to use the native healing procedures or sciences. That was one of the great surprises I had. I came back and I thought that I had learned Western medicine and this is a modern age of technology and people have come to conclusions concerning methods of treatment diagnoses and so on through research and the scientific method. There can be no other way, I thought. Many physicians who come to the Navajo Reservation or any reservation have that feeling. But I was at Tuba City when a Hopi man sent a patient up. The patient came to me and said, "Say, Doc, I broke an arm and I had my own medicine man set my bones; would you take an x-ray and see if they're okay?" I took an x-ray and they were in perfect position. There were cases where Hopi medicine men sent patients to the hospital for x-rays or verification.

When people say that medicine men and native healing sciences and native healing arts are backward, I think these people really need to stop and learn before they continue to preach that kind of gospel. They need to spend a little time among Indian people because down through the years one of the elements of group survival is the health and the health care of any group of people. One of the things that helped the Indian people, particularly the Navajos to survive, was their preoccupation with health. It was fortunate that they had that preoccupation because of the health practices they developed. It was one of the things that enabled them to survive all the tragedies that they had to go through. I think of the long walk to Ft. Sumner when tremendous demands and stresses were placed on the physical makeup of Indian people, and yet, they survived. They had developed a medical care practice that could get people well when they became ill or otherwise disabled. I remember my own grandmother. My grandmother was a mid-wife and probably she was one of the foremost mid-wives in the Shiprock area. She was known. She would get called any time of the night. I'd be in a sheep camp, and people would knock on the door all hours of the day or night to get assistance in the delivery of a baby. You know, I've watched her from time to time to observe some of the maneuvers that she used to go through. She would say, "The baby's feet are going to come out first," and she would try to manipulate the baby to turn. Now, when I got to medical school and when I got to the OB/Gyn section right in the textbook by Eastman, there's a demonstration of how you have to turn a baby by using external forces. It didn't take this kind of medical school to teach my grandmother to do those sort of things. So, don't ever say or don't ever accept the unkind things that people may say about the art of healing sciences. They come from a very practical experience and trial and error. Did you know that Navajos can treat an ulcer? They will take the urine of a sheep and treat the ulcer, the sore, or an open wound, because the urine is sterile and has certain antiseptic qualities. These are very practical things and methods that Indian people use with the kinds of things they have on hand.

One of the things that I discovered is that the more I learned the more insistent I have become that as Indian people move in to medical education, the native healing sciences become a part of that medical education. One

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of the things that I also discovered was that among the native healing sciences they have their own little groups and they have their own little practices. Let's say that I'm a surgeon and I get to know another doctor who is a general practitioner. Let's say he takes care of everything, but is not a surgeon. He sees a patient and sees that the patient needs to have an operation, but he can't do the operation. He sends the patient to me, and then I do the operation, get the patient back on his feet and when I'm through with him I'll send him back to his own family doctor. This is a referral system. Navajo medicine men are no different from Western doctors. Did you know that Navajo healers and practitioners do exactly the same thing?

We have three groups, we have the diagnosticians who don't treat or give medicine, but they'll tell you what's wrong and they'll say, "This particular medicine man is good at taking care of those problems; you go see him." That's the referral system which is no different from what goes on in the outside world. Sometimes doctors are accused of fee splitting. Medicine men do exactly the same thing. If you think that you're going into Western medicine and you want to do things differently, you have a crude shock coming to you.

Medicine men also have a hierarchy. The diagnostician makes a determination of what's wrong with you and then he makes a referral to the medicine man who specializes in that particular area. There is another group who are called herbalists. They know all about herbs. They handle herbs correctly. When you gather herbs you have to treat them correctly. You ought to perform little ceremonies as you gather the herbs, and so on. My grandmother was an herbalist. These people are kind of like you. They're expedient people. To be treated by medicine men is an expensive proposition, no different from the Anglo world. It's an expensive proposition, so sometimes you have to be satisfied with the little less, as you might say. So, here are all these people running around that know what medicine is good for what. It's like going to the local drug store and buying some aspirin over the counter and it keeps you going until you get enough money together to get the real thing, the medicine man.

It's a story I like to tell to doctors--Anglo doctors--because in the hierarchy, where do Anglo doctors fit in? Well, they certainly don't cure. You go to the hospital; they ask you a few questions; they give you some ineffective medicine; and they send you home. They certainly can't be medicine men because they don't cure. Well, they're certainly not diagnosticians; otherwise why would you go to a hospital, and then when you get to the hospital they don't know what's wrong with you. So, they ask you all kinds of questions to try to find out what's wrong with you. They can't be diagnosticians. So they must be herbalists. They just pass out the pills. When I tell that story to the physicians it is some kind of a shock to them.

I could talk forever on the kinds of things I've experienced practicing medicine on the Navajo Reservation. One of the things that I like to remember, and I was called on the carpet for, was when I came back to Kayenta. An old man that came in was a practitioner. You know, in the Anglo world, there are good doctors and bad doctors, and there are evil doctors, the real bad kind. In Navajo medicine you have the same thing.

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You have good medicine men and you have evil medicine men. When I came back, one of the things I like to remember is that I was so caught up in doing histories and physicals in the Navajo language. I was eager to learn every thing. A medicine man who came in said, "If you'll listen to me for a few minutes I'll tell you all about the kinds of things that I'm doing."

Because he was a medicine man I said, "Gee, that would be really interesting; let's hear it."

He started to talk about witchcraft. He said, "You do this; you do that; this kind of thing"; and before I knew it I'd been listening to him for an hour and a half. I hope you don't think that I'm a witch doctor. Those were the kinds of experiences that I've had and it's really been enjoyable. I hope that you, as students here, will become interested in the health career; and I hope that out of this group that I'm looking at, maybe there are three physicians, maybe two dentists, maybe about a dozen nurses, and so on. Just put it this way, that if I, as a reservation Indian, not having the benefits of Western society, can become a physician on a B average in high school and in college, just think what you can do.

PAPAGO WELCOME

by

Cecil Williams
Director of Mental Health Program
Chairman of Executive Health Staff
Papago Tribe of Arizona

Our Papago Tribal Chairman was not able to be here. He had to attend to some other very important business. He asked me to "welcome" you on this 5th health conference, health training career conference. So, I welcome you on behalf of the Papago Tribal Council and the Papago Tribe.

I'm going to talk a little bit about health. I serve as chairman of the Papago Health Staff, and it is composed of all the health programs on the Papago Reservation. A very important issue this morning is health. Sometimes other things are more important than maintaining one's own health. Somehow health among Indians has been overlooked and sometimes it has been grossly neglected. Until recently, there have been substantial amounts of assistance and money that have finally been used on the reservations. And, yet, in spite of assistance from many areas, few improvements can be seen.

With some experience, Indian leaders realized programs are sometimes unlikely to succeed although such programs are guided and directed by Indians. This realization in itself does little to alleviate the health problems. We sometimes compound the problem by attempting to achieve and solve problems in a manner that has already been a failure, in some cases a catastrophe.

Little consideration is given to how Indians may have taken care of themselves without health systems. It's very hard to realize or recognize

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that there may have been a different method of administrating health care. It required some thought and may require some mending and soul searching about native health care systems. We, on the Papago Reservation, have attempted such an effort. I will say that it has been very difficult. We have developed a system based upon the characteristics of our culture and we have attempted to modify different health efforts to meet our own needs. A very important example is to call our programs for the aged, "the programs for the wise ones"; the other definition sometimes indicates uselessness. In any moment I can talk to my grandfather and grandmother and I'm a child in what I thought I knew in knowledge and wisdom. When I speak about health systems I think of a system that is scientific, but responsive, and above all, understanding to our own people.

By this time you might be wondering "where do I come in?" There is a very basic and fundamental first need, and that is to learn textbook skills and to develop those knowledges that are required for you to be physicians, nurses, sanitation engineers, electronics technicians, social workers, mental health workers, dieticians, x-ray technicians; and you accept this training to serve your own people in whatever tribe you may be. It still requires hard work and dedication and things we dislike, like studying. But unfortunately those are things that we have to do to help our own Indians.

AMERICAN INDIAN AND HEALTH

by

Dr. Charles McCammon
Director of Indian Health Service
Phoenix Office of U.S. Public Health Service

I have a problem. Besides feeling like Custer, I have so many different types of issues and subjects that I'd love to talk to you about; I just don't know where or how to get started. I didn't want to insult you by starting to give you a speech that we give to non-Indians about what the Indian Health Service is and what are the specific programs and problems of Indians because you all have used that health-delivery system all of your lives. You know the things you like about it and the things that are bad and deficient, as well, maybe better than I do.

I'd like to try to give several short mini speeches. There is some relationship from one subject to the other; they're not totally related, but still different enough so that I do not want to call this presentation one speech. There are ideas I'd like to leave with you and maybe one of the mini speeches will appeal to you, and you'll find an idea or thought that you like. Maybe none will. Maybe all will.

I think you know as well as I know that the health status of the people on the reservation today is pretty much the product or result of the socio-economic environment. Now, I like to say that that status is primarily due to a lot of "not enoughs," not enough job opportunities to provide good economic security; not enough adequate housing to prevent over-crowding and protection from a sometimes harsh environment; not enough good roads,

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communication systems or transportation systems to get people to schools, to work, to health facilities, or to health people in your community. There's the health-delivery system itself which has many inadequacies; and I think that you'd have to put it in "not enough." Over the years there has been "not enough" education opportunities.

Although these "not enough's" do have a specific impact on some of the health problems and conditions that are seen on the reservation, there are some problems that come into focus that show some Indian people are different. In southern Arizona, Indian people have less high blood pressure, less coronary heart disease, less heart disease--that is, where the major blood vessels to the heart are plugged up and the heart dies. There's less diabetes in the northern part of Arizona but much, much more diabetes among Indians than any other population in the southern part of the state than in the rest of the country. Hardening of the arteries is very uncommon among the Indians in southern Arizona. None of these things have been researched and studied, though some of the things that have been studied have been on the metabolism of cholesterol. Cholesterol is fatty-like substance that is in the bloodstream and is metabolized or is burned in the liver and gets into the bile. There seems to be in southern Arizona Indians some major difference in the way the cholesterol is metabolized; and much of it is precipitated, or settles out in the gall bladder, and forms gallstones. There are cholesterol gallstones in non-Indians, but not to that degree. Those of us who are non-Indians seem to metabolize our cholesterol by putting it down in the walls of the heart and thus we get hardening of the arteries. Here's a major difference that hasn't been identified until recently through research.

There has been a lot of research done on diabetes which is very, very prevalent and common; but it's a different type of diabetes that we saw at medical school or see in the rest of the country. Rarely is diabetes seen in Indian children.

There is another condition not common to the southern part of the state that is prevalent in the tribes further north. This is congenital hip disease. It's not found in that degree in any place in this country and in only small areas throughout the world.

There may be a lot of other things or health problems that Indians have. The Indian Health Service does not have money for research. It's going to be, I think, your generation's problem and challenge to have the opportunity to study some of these health problems of your own people. In the solving of the problems you may be finding the major answers for the whole field of medicine.

There are a lot of other major health problems on the reservation that you all know about such as respiratory diseases, pneumonia and influenza, diarrhea and dysentary, tuberculosis, high infant death rate, problems of pregnancy, and what not. These are not unique to Indians. These are the direct result of the "not enoughs." They can be found in any of the other comparable social economic groups.

If we ask the tribal leaders most would say alcoholism is the number one health problem. Why? Is it because Indian people have a problem in

their way of life in adjusting to the transition from Indian to non-Indian culture? Is there something different in the way they metabolize alcohol? Could the metabolism of alcohol in Indians be like cholesterol? Both of them are metabolized almost alike. Both of them cause damage to the liver. There may be something there. It is a major problem. You know it, as well as I know it; and I think, again, the challenge of solving this problem is yours.

There's one thing that this group in this room should have--the best immunization level and the best dental care--for your age group that could be found in the state. There has been an intensive service for Indian students in school in dental work and immunizations.

Okay--enough on that subject.

We'll try another one. Throughout most of the history of this country, people have felt that if they could just have a good medicine man or a good "ole" country doctor or family doctor in their community, they would have everything they needed in a health-delivery or health-care system. Someplace in the last two or three or four generations that idea and concept started changing. It changed on the Indian reservations. It changed every place in the country. People began to think,"If we had a hospital in our community, then we'd have what we need for health care and health-delivery system." Well, I'd like to argue that point. I will point out things:

1. To me hospitals are necessary and we have to have them; but the hospital with the in-patient care, to me, is an indication of a failure of the health-delivery system. The health-delivery system, the health care of people should keep more people well, and keep them out of the hospital. You know that there are some diseases that we're a long way from finding the answers to, like cancer, and care of such cases will end up in the hospital. We still think it's wise for women to go to the hospital to have babies. There are still accidents that require hospital action. However, accidents could be reduced with enough education.

2. Basically, I'd say that what we need is a change of attitude in the concept of an ambulatory-care program, a program directed at keeping people well.

Now, I think I understand the concept of the many, many years and generations when people just had a really capable or sharp medicine man, or a family doctor. I can understand that because people tend to think about health only when they don't have good health, or when they're sick or injured. They think that the hospital is a symbol of a good health-delivery system. Changing the concepts is one of the problems that we're faced with in the health-delivery program here in the United States. I think that this is also one of the challenging things of the Indian Health Service.

Let me take just a little bit of a different approach on this same subject. Consider the entire history of man. Think how many thousands of years man must have moved no faster than he could walk, or paddle a boat, or ride a horse, or a camel, or an elephant. Most of the life of man has been at that stage. For a few years we had the wheel and the steam engine and the gasoline engine, and we started moving a little faster, maybe up to faster than 100 mph. It's a very short period in the life of man. Then,

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almost over night, we were flying and traveling faster than sound travels; and the next thing we knew we were flying to the moon and back, and that is just about a second in time in the history of the life of man. Well, medical science has been moving at almost that same rate.

For thousands of years, people received what was really folk medicine. The start of scientific medicine was the discovery of microscopes, the germ theory, x-ray, and the training of physicians; that would be about comparable to the period of the steamboats. Suddenly, during the two world wars and immediately after the second World War, medicine has had a big, big shot forward. It's just like the space travel. And with that has come some very costly and some very sophisticated equipment. This makes the cost of health-care delivery in a hospital tremendously expensive. It makes it so expensive that much of this equipment can only be put in medical centers; much of this is not even in the medical centers the size of Phoenix Indian Hospital. Many of you probably have seen Star Trek in the days in was on television, and you remember the doctor who went around with his little scanner and diagnosed everything with some electronic scanner. Well, you know, we're almost at that stage now. We have those scanners. The only thing is that you can't carry them around in your hand; they're bigger than the x-ray units, much larger. The patient has to be completely scanned with this tremendous thing; but it is probably the same concept that was visualized in that science-fiction show. These things are coming.

The time it takes to get highly specialized physicians, nurses, and other technicians to operate some of these machines makes it more important that we develop a program of health maintenance to keep the people well, to keep them out of the hospital. What we're talking about today is an ambulatory health-care program which is both prevention and health education and care of the sick who are not in the hospital.

I think the biggest advantage with the Indian Health Service is that we have one health team who can focus on the total health problem, the health of one group of people, the Indian people. We're not focusing on just one segment of it, the doctor's office, or the hospital, or the laboratory, or the health department. It's all one program--all one health department--health-delivery system for one group of people. It's a federal system and it has lots of problems. It's a bureaucracy. It's a little one, and one of the problems that it has as a federal bureaucracy is how does it survive and keep its identity within that great big mass of what goes on in Washington. It is the same problem that Indian people, who are numerically small, have in keeping Washington's attention to get aid and assistance. That aid and assistance has been very good. Indians have been popular in Washington for health appropriations in the past seven years. The pendulum swings. Now it's over here at the right; it's for Indians. I think one of our problems in the Indian Health Service is that we have so few Indian employees. I'll come back to that a little later.

A lot of you--and certainly most of the people outside of the Indian country, the Indian reservations--don't have much understanding about what the Indian Health Service is, or what its authority is. The Indian Health Service came into being in 1955 when Congress started to take over the health-delivery system from the Bureau of Indian Affairs. U.S. Public Health Service told Indian Health Service: "You have the authority that

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Congress has given you to conserve the health of Indian people, to provide health care, and to build health facilities. You have to provide them health services; you don't have any other authority. You don't have the authority to select sites on which to build hospitals, clinics, or houses. You don't have the authority to establish health codes; that's the tribe's. In other words, the whole concept is based on the sovereign rights of the tribe as the local government with the Indian Health Service being the provider of health services. You know, some of us were rather stupid and slow; we thought some of this, particularly those of us who had been trained in health departments to be health administrators and work with county health departments, that health officers had to be enforcers of the health laws of the reservation. Finally, about five or six years ago, the Indian Health Service came out and said, "This is your program, Indian people. We want to carry it out in the way you want it, and we must start working together. You are the local government; you are the people. We are the providers."

And, so we said, "Let's start on first a partnership approach of planning. Let's see if we can get an advisory board established and a health board to be focused on the health problems of the Indian people as they see these problems; and also help them to try to understand the gobbledegoop of all the red tape of the federal health system. You tell us. You be the spokesman to tell us what all the people want." When the tribes are ready they will take over and run the health programs. Now, in Arizona, the Papago, Gila River, Hopi have established health departments which are funded through contracts with the Indian Health Service and other agencies. They have started to develop their own health-delivery system.

In the Indian Health Service five or six years ago, the Indian involvement--the partnership approach--was something new like we were rediscovering the wheel. But it really wasn't. It was still the basic concept that Congress developed way back in 1934 when it passed the Indian Reorganization Act. The intent in 1934 was to encourage Indian tribes to use their right of self-government. In a recent Supreme Court decision the court reviewed the intent of Congress in passing the Reorganization Act which was that the Bureau of Indian Affairs on the Indian Reservation is not like any other federal program. It's like a local city or county government. Then why shouldn't Indian people be governed by Indian people, running the B.I.A.? The Indian Preference Policy on employment was set up on that basic concept and Indian preference made an exception for appointment on the Federal Civil Service System because the Indian people had been handicapped by work experience and educational opportunities as far as being able to compete under the competitive Federal Service System. Okay--now another subject.

Several years ago, one of my sons when registering at Arizona State University, had to fill out a questionnaire; and one question was: "Why did you come to college?"

And the answer he gave was: "Because my Mother and Dad expected me to." Well, I wasn't particularly happy with that answer, but it was correct. I could have said the same thing when I went to college; but the difference was that my mother and father wanted me to go to college because they felt

that they had been denied that. They did not have the opportunity to go to college, so that was why they wanted me to go. My wife and I saw college as part of the growing-up educational process of young people. It presents an opportunity to develop an entire new vision of your world instead of that little community you've lived in all your life. It doesn't make any difference whether you're Indian or non-Indian. Going to college is being exposed to other people and to new ideas. It's an opportunity to mature, to establish your own personality, to find what you want to do, where you want to go. I think for you young people concerned, I can put it two ways:
1. If you want to split from the reservation, then you really should go to college. You need that exposure to develop skills and contacts when you get away from the reservation.
2. If you want to develop your own Indianness, your own heritage, then I think you definitely should come to college because you're going to get the opportunity to meet with a lot of other Indian people.

These libraries have tremendous resources of excellent books on Indians. You can really develop that concept as well as prepare yourself for the future.

Now, you know, in your generation, much of the tribal business from the reservation is going to come from the college graduate; and hopefully, some of that will be the health-delivery system. I hope that you're really going to be interested in going into the health field because, as I mentioned, only 54% of the employees in the Indian Health Service are Indian. Now, that may not sound too bad; but it is, because most of those positions are the nontechnical, nonprofessional, custodial, wage-rate type positions. They're not the professional positions. In the Phoenix area among the civil service employees we are up to 65% Indian people. Now, in the Indian Health Service last March, a year ago, there were these professional opportunities. I want to list the number and type of positions and the number of Indians that are in those positions. You can see how distorted it is as far as the health professions go.

500 physicians--three Indians
184 dentists--no Indians
220 mental auxiliaries--188 Indians
Here is one that will surprise you: 1,130 graduate nurses--208 Indians
958 practical nurses and nurses' assistants--885 Indians
185 sanitary engineers and professional sanitarians--17 Indians
92 sanitary aides--83 Indians
140 pharmacist positions--7 Indians
24 public health educators--13 Indians
30 dieticians--no Indians
9 nutritionists--no Indians
29 medical records librarians--3 Indians
250 medical and x-ray technicians and technologists--95 Indians

I'd like to tell you briefly in closing about a very exciting piece of legislation that passed the Senate in the last Congress. It is what we call the Jackson Bill which is really "The Indian Health Care Improvement Act." Title I of that Act sets up about 160 million dollars over a five-year period for Indian health professional scholarships. Right now the Indian Health Service does not have a scholarship program. Our funds are not

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appropriated for scholarships. We have I.H.S. employees who are in long-term training in both graduate school and undergraduate school; and others take short courses. This training is funded by regular operating funds and is restricted to I.H.S. employees. But, we do not have the authority like the Bureau of Indian Affairs has on scholarships. There is a new scholarship program for physicians in the U.S. Public Health Service; and we, in the Indian Health Service, are being allowed to participate in that by having 250 scholarship slots for medical students. The Indian Health Service says that any Indian student that makes it to medical school and wants one of these scholarships is guaranteed of having it. But the big excitement is the opportunity to build in a big health professional scholarship program through the Jackson Bill. The Jackson Committee has identified the need for over 6,000 Indian professionals to be trained in a five- to ten-year period to be able to put into effect this concept of self-government. I hope that all of you who are here will be very seriously considering going into one of the health professions. You don't just have to be a doctor, although we certainly need doctors; and we need Indian doctors.

THE CHALLENGE OF INDIAN HEALTH CAREERS

by

Mr. Don Jennings
Executive Director
of the
Association of American Indian Physicians

The Association of American Indian Physicians (AAIP) is a national organization with headquarters in Norman, Oklahoma.

When the Association was formed, a little over three years ago, one of the questions asked of its members was why they were coming together. One of the most glaring answers that they could point out at that time was that only 32 American Indian physicians could be identified.

To increase its own number thus became one of the primary missions of the Association. At the present time, AAIP has identified 60 Indian physicians. Of that number, 42 participate in the activities or purposes of the association.

There are 360,000 medical doctors in the U.S., based on a population of around 220 million. For the purpose of comparison, if the Indian people were to be represented as physicians, there should be over 1,500 Indian physicians. Again, we have identified only 60.

There should be over 3,000 nurses, based on population comparison, where in fact there are only a few more than 400 American Indian nurses who have been identified to this date. So you can see why the association is interested in increasing Indian representation in health professions.

One of the major activities of health-career recruitment, the primary purpose is to recruit not only physicians, but all health professionals,

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such as medical technologists, dentists, veterinarians, optometrists, and podiatrists. Also included in the public-health profession are nursing, public health, and speech therapy.

The progress in the past three years has been great. In 1971, we could identify only 17 American Indian medical students. Last fall, there were currently 130 enrolled in medical schools. The AAIP has been instrumental in assisting some of these students in meeting some of the barriers and problems that they have encountered in trying to enter into a health profession.

The association has worked in the past three years to provide a recruitment service in three general areas: first, to provide information on financial assistance for those students who want to enter into a health profession--not just medicine, but all health professions; second, to provide health-career information on the prerequisites to enter into a health career. What are the financial needs that you will have to get through school? What are the academic prerequisites? All of these things are involved in the health-career information. The third area that we work in is that we try to recommend schools.

The AAIP has been effective in identifying and recommending professional schools which students should attend. Very briefly, this identification is based on whether the school receives money from the government to recruit minorities or Indian students, advocated for American Indians to get them into the professional schools, and actively recruit American Indian students. We have compiled a list of schools which we recommend to Indian students.

There are many organizations involved in health career recruitment, such as INMED (Indians Into Medicine); NAM (Native Americans Into Medicine) in Minnesota; Montana Health Careers; Navajo Health Authority; Med-Start; California Rural Indian Health Board; and United Southeastern Tribes. All of these agencies are doing health-career recruitment.

There have been many people who have put in many hours to bring students together, like yourselves, to open up the doors to show you the way, and now the question arises, "Who is here to meet the challenge?"

Before I came up here, I briefly scanned the lists of Indian medical students and physicians. Tribes listed were the Kiowas, Cherokees, Chippewas, Navajo, Creeks, Ottawa, Iowa, Seneca, Cheyenne, Delaware, Choctaw--and the list continues. But, out of all these tribes, I saw no tribes represented from the Southwest, as medical students or doctors. Where are the Pimas, Papagos, and Apaches?

To me, that is a challenge; and it should be to you. One day when you walk into your Indian Health Service or clinic, your tribe will be represented, and you could be the first.

The way is lonely and the training difficult. Right now you have a nice friend to look at and to laugh with and talk with. If you become a physician, a dentist, an osteopath, or a nurse, there will be times when the road will be lonely, for you may be the only Indian in that school striving to become a doctor or a nurse, etc.

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But a lot of the doors have been opened. That is one of the reasons why you are here. The challenge is yours.

Once you reach graduate school--I have heard a lot of dental students, medical students, and physicians say that they are singled out because they are American Indians. Everyone looks at them a little bit more closely than they look at other students. Are they waiting for you to make an error--waiting for you to mess up? It's going to be hard!

Dr. Beryl Blue Spruce, Pueblo Indian physician who is now deceased, took upon himself as one of his personal goals to see that more Indian physicians, nurses, and dentists were available to work with their people. I would like to quote a paragraph from a speech made by Dr. Blue Spruce:

> "Medicine is a field that requires every call, every ability, every skill a human can possess. If you are an artist, you can use that skill as a physician; if you are female, by the mere fact that you are female, you have something unusual to contribute to being a physician. If you have a feeling for people--if you have a sense of being able to handle people and feel comfortable with people, that's an asset in medicine...."

What I am saying is that, even though you may not have a straight "A" average, you may have the attributes in other areas that will make you a great physician, or a great nurse, or a great dentist. I also want to say another thing: by the mere fact that you are Indian, the policy that you were brought up with, the values that your parents have taught you, the culture you have been raised in--these are things you can give that medicine cannot get without our being involved.

Health is an Indian issue. I would like to think in terms of what you, as a health professional, someday can do for health in general. Indians have an obligation to make a contribution to fulfilling those needs. By making our contribution, we have the ability to add something to being a doctor or a nurse. When Dr. McKenzie, the Navajo, practices surgery, I am sure a little bit of Indian goes into that.

You have an opportunity today and tomorrow to ask questions of the people who will be here--an opportunity that was not here yesterday. I hope you will meet the challenge....

THE NEED FOR AMERICAN INDIANS IN HEALTH CAREER FIELDS

by
Dr. Erwin S. Rabeau
Director, Office Research & Development
United States Public Health Service

I am the subject of my talk. I've been 28 years in the Indian Health Service and I've served from the northern most part of Alaska to Tucson where I am now. I spent a number of years as director of the Indian Health Service in Washington.

I really don't think I have to tell you why there is a need for Indians in the health-career field. For those of you who have ever been ill and received services at one of your Indian Health Services' facilities I think you could probably answer why we need more Indians in the health-career field, yourself.

People are different; people are alike. You and I have some values set that are exactly the same and some that probably differ markedly. Considering the differences in how we perceive things, it is exceptional that you consider working in the health field among your own people. I think that the noblest profession that mankind can engage in are those human services such as education, ministry, and I think the health fields. I admit to a built-in bias. Being a physician, I think that working in the health field is probably not only rewarding from the viewpoint of the satisfaction of reducing illness and saving lives, but from the challenge that it presents and the satisfaction you get from helping somebody that is less fortunate, with pain or suffering or problems that you are able to help resolve.

In the Indian Health Service about 50-55% of the personnel are Indian and Alaskan natives. Unfortunately, the great percentage of them are in the semi-or sub-professional positions. It is not because we have recruited on that basis, but on the basis of the fact that there are very few Indian physicians, very few Indian dentists. Probably the greatest number of health professionals that are of Indian descent are nurses. There are a lot of other reasons why there are so few professionals and I think you probably know them as well as I do.

Let me say something which is a little seditious; and I wish you'd carry it back with you. One of the biggest problems you'll have in considering a health-career occupation is the schooling you get before you get to college. Rural schools, be they Indian schools, be they non-Indian schools, throughout the United States are notoriously deficient in their science curricula. There are a lot of reasons for it: There's a scarcity of teachers of science; it requires a tremendous investment in equipment to be able to provide adequate science education in high schools. The schools, and I'm sure there are exceptions, that you attend are deficient in science, and I urge you to discuss among yourselves and your parents and see if there isn't something that can be done to bring them to a higher standard.

We have a problem among our own personnel. Let me just cite you one training program that we have in several places throughout the country. We take our licensed practical nurses who wish to further their education and become registered nurses and get their degree. We have training programs in which we send them off as employees to work full time on getting their degrees in nursing. We find they have a great deal of difficulty because their scientific education is sadly deficient, and as a result, all of our programs have built-in a tremendous amount of tutorial support. That is, we have tutors to help them make it through the scientific aspects. If I say nothing else to you today I hope I get that point across. I surely would like to see, before I close out my career in the IHS, a lot more Indian health professionals.

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Let me just tell you briefly that besides the careers that I notice mentioned in the program, there are other careers that are in the health fields that you may find of interest and that you may find a challenge. Here in Tucson, out at San Xavier, we have the Office of Research and Development and we are doing research on health-services delivery. We're trying to find better ways of delivering health services. Now we're not talking about biomedical research, we're not talking about studying diabetes to find a better therapeutic agent, but what's the best way to deliver health services. What kind of a mix of health professionals and subprofessionals we should have? We've come up with a whole array of interesting programs. There are some interesting things about it. One is, that if you look at a health problem, take any one you want, you say has to be done to solve this. You can set up a whole bunch of functions and you can look at these functions, break them down into tasks, and if you identify all the tasks that have to be done, you find that you can take people with a minimum amount of medical education and health education and train them to do these tasks exceedingly successful. I'll give you an example: Infant diarrhea on the Papago Reservation is a major health problem for about five months of the year. Working with the executive health staff of the tribe there, we jointly devised a system by which we took the community health representatives (most of you are familiar with the community health representatives, "CHR's"?) and took the scientific approach to problem solving which is information gathering, assessment of the information, treatment plan, the treatment and the followup; and we broke it down under those functions. We broke down the tasks and found that it was possible to train the CHR's with a minimum amount of training to perform at a highly professional level. The program was extremely successful. The first year of the program, instead of having four, five, or six infant deaths from infant diarrhea, we had none. We had a 55% reduction in hospitalization of infants with diarrhea. We had 27% reduction in the number of cases of diarrhea that occurred. It was all built around the fact that the outreach worker went into the home, sat down with the guardian or mother and talked about the phenomena. What is diarrhea? What causes it? How do you recognize it? What can you do about it? We then set up a system that allowed them to treat or refer, whatever was necessary. We had this marked reduction. Now this is just one example of all kinds of research projects.

We have all kinds of research projects. I guess really it leads me into suggesting more types of health careers that some of you may want to consider. One is a brand new field. It's a very necessary field. We have a need for it in the IHS; in fact, we're looking now to set up a training program in it; it's called clinical engineering. What it is is biomedical engineering. Modern medicine requires some very effective sophisticated electronic-computerized equipment, including such things as x-ray and all kinds of laboratory equipment. It's all very difficult to maintain though it's a great labor-saving device and a much more accurate way of doing things. There's a shortage of this type of maintenance personnel in the country. We're working; and hopefully, right here at the university, will be one of the places where they will set up this type of a program on a fellowship. That's one area you might consider.

Another area you might consider is the field of operations research, and systems analysis. You can ask where does that come into health? Well,

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this field really came about with the space program, when we had to put a man on the moon. It required a whole new approach to the looking at the requirements, and how do you decide the best theory of engineering and how to accomplish it. We came up with a whole new breed of tests. These people come from odd backgrounds. Some of them are mathematicians; some of them, believe it or not, come from an anthropology background. What counted was the ability to sit down, to look at a problem, and to be able to separate the problem into parts, so that you can lay it out for a rational analysis of it. There's a new field there in health careers particularly, and there's a dire necessity for them. That's a little more exotic than the esoteric type of things. I'm sure that your previous speaker was much more effective than I can be about telling you to become a health professional. I say, and I say again, it's not an easy occupation. It requires a lot of work and dedication, but I think you will find the rewards of serving your fellow man are unequaled by any other occupation.

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I'm Arthur Grayeyes from the University of Utah, a third-year medical student. I was raised herding sheep, which probably most of you have never done, though some of you have. I speak my language fluently and I went through B.I.A. system of education. I went through public schools, through college--several different colleges. I dropped out of high school at one time. I served in the armed forces, and I studied to be a lab technician, and then I entered medicine. I also know a little bit about Navajo medicine. I know just a little bit about everything; and I'm enough of a reservation Indian that I carry my pouch with me all the time--for good luck, maybe--or superstitious, maybe. Some people refer to it as that. But I consider that that's a part of me and I'm proud of it.

You can make it into medicine. And I see many problems--problems that you don't ever think existed. It's good to see Indian people becoming aware of some of the problems that exist. This is the reason why these seminars are held, where Indian people can come together and take a look at what's coming up, what some of the problems are. Also, you can meet other students who are interested in some of the same fields. At one time it was almost impossible to enter medical school, but not so now.

Indian people are beginning to get really aggressive and competitive. Indian people are very, very smart--very bright people. You're fortunate if you can understand two cultures. You're that much ahead if you listen to some others that may speak about something. Just listen and you will know that much more. You know twice as much as what the other person knows, and what he's talking about, because you have a different lifestyle, different culture, different way of living that they don't understand.

When I was herding sheep I was about six years old. I had never seen a white man before this time, and my sister and I were herding sheep. I heard an extremely loud noise, and I looked around behind bushes and stuff like that. I couldn't see anything. I looked up, and there was an airplane. I thought it was a bird; but birds don't make that much noise. So I ran up to my sister and said, "What's that up there?"

She said, "That's a flying car." You know that's what it's called in Navajo--"Chity be teh."

I said, "What is that?"

She said, "Something that white people make." I asked, "How do they make it?"

She answered, "I don't know. Grandma knows all about it. You get home and ask Grandma." I was anxious to get home because I wanted to find out what that thing was up there, and when we got home, there was my grandmother.

I asked, "Grandma, we saw this thing that was making a huge noise--this loud bird. My sister tells me it is something that white people make."

She said, "That's right."

I asked, "How'd they make it?" I thought that white people were very smart people, very intelligent people, tall, blonde, something about what you might conceive, if you're in Christianity, of what a god might be.

Anyhow, that's what entered my mind; and she said, "If you're not a good little boy, you know what they do to you."

I said, "I don't know."

"Well," she said, "you know, they come and get you."

I said, "Not me. I'll climb trees, run away."

"White people very smart," she said, "you see today they can even fly. They'll come and get you."

I said, "What will they do with me after that?"

She said, "I heard white people eat little Indian boys. That's true, you know." That shut me up. I thought I'd better not ask any more questions; and I proceeded to be a good little boy.

Another thing that has happened to me that may be of interest to some of you—when I was going through college and trying to prepare for medicine I knew that I had to face dead people sooner or later. I prepared myself and assured myself in my mind that I would face that because that's one of the things you have to do when you're a doctor. But as a young kid, it was ingrained in me that you don't fool around with dead people. When they're dead you put them away; you bury them. You don't cut them up or do anything like that. When I entered medical school the very first day the professor of anatomy came up and said,"Tomorrow you will meet your partner; I want you to get some soap, shirt, white jacket, gloves, scrub brush. I want you to scrub your partner."

I thought, I'm going to have a live partner and I have to scrub it. That was okay, but come to find out that he meant a dead individual, a dead person. So we came with white jackets, gloves, masks, and everything else the next day; and they had 18 bodies—18 dead people. They were young, old, female, male. There were 100 of us. They assigned us. There were six of us assigned to one cadaver. This is a world so you know when they're dead. It was in a sack, so one of the fellas went up there and unzipped it. There it was, almost as white as a sheet. I just stood there and looked at it; and I thought. Here goes! Wonder what's going to happen to me? I stayed away from it; I just walked around the table and let the rest of the guys do the work, scrub it, shave it, everything else. I didn't touch it. That night I tried to go to sleep. I never did get any sleep because every time I tried to sleep that face would pop up in front of me. I had to jump up. I couldn't sleep. For two weeks I didn't sleep. For two weeks I didn't touch the dead body. I stayed away from it. And then I decided, well, it was my choice that I wanted to enter that field. I have to get over it! I was getting behind. I wasn't studying too well. And then at midnight I went over there by myself and sat there for about an hour. Finally, I just barely touched it. Then I began to work at it alone. I

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worked at it. I got used to it, for about a week. Then I got the bright idea that I would turn off the lights. So, as I worked on it I would go over there to the lights and turn them off, one at a time. I would just flip the last one off and turn it back on. Finally, I got enough courage together to leave it off a little bit longer. Every time I turned off the light I would just listen for every little noise.

Have you ever slept at night in the dark? You seem to hear things much more. Boy, anything that went on up there I knew about it. I had to flip that light back on, but finally, I was about to overcome that. Then after I would turn off the light I'd go there to the cadaver and work on it. This took me a month, so I was almost a month behind. That was my first year of medical school.

In answer to the question: "Since you are a high school dropout, what made you go back to high school?" I dropped out of high when I was a sophomore, simply because I went to what they used to call a five-year program for Navajos. During the first three years, I learned quite a bit. The next four years they put me in a regular grade system. Then, after the three years, they weren't teaching me anything. So I decided I must have learned everything that could be taught in school. I dropped out and joined the Army. But,while I was in the Army I found out that there were a lot of things to be learned, so I worked at trying to go back to school for another two or three years. Finally, I got back in school and I have been going to school ever since then.

My name is Calvin Kelly. I'm a Navajo Indian and I know more about the Navajo, how the Navajos see health, and all that. About a month ago there was a workshop at Window Rock and we heard Annie Wauneka speak. She stressed one thing, and that was that we have to have some action from students. You can talk about all kinds of problems and how you need this, and that, but people have to get out and do something. One of the biggest problems I see among the Navajos is that the people who live on the reservation and go to reservation schools know they're different from bordertown students. They talk diffferently; they joke differently; they just act differently. They think differently from the people in border towns. When they go out to a college or university they have to make a social adjustment, and they can't really relate and interact with people of different ethnic groups. Some people are kind of shy, acting differently. I think, as Dr. McKenzie said yesterday about ethnicity, people just have to be open about how they feel. This ethnicity thing--it's a barrier to overcome. You need to overcome it.

Comment from Student in Audience

You feel like you're looked down upon. I think the main reason is that if you're born on the reservation you have this feeling that all the people that you know from the start will live with you throughout their lives. They're going to live with you, and if you make a mistake these people are going to see the mistakes and then sometimes laugh at you about it. That's why there is this shyness. If you go out and meet more people out in the world, it will be that way still. People who are born in the city, or who live in the urban areas, don't feel this way because they meet a lot of

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people. They know that sometimes they won't see them again in their whole lives. I think this fear of people you know laughing at mistakes, of adjusting off the reservation in college, is the problem.

Comment from a College Student in the Audience

I'd like to make some comments about the high school level. You could form a student health career group or organization. We have Indian clubs at the high school level and there are a lot of organizations at the high school level. I just don't remember what kind of organizations there were when I went to high school, but I do remember having a Russian Club, French Club, and Pep Club, and all that; but I don't remember having a health career education club at the school. Maybe some of the high school counselors could think about this for now and then as this session continues they could make some comments on that further. I'm from the Navajo Reservation, too, at the college level. At the graduate level there is a lot of research going on in medical science, and all kinds of research.

My name is Julius Pete. I'm one of the counselors with the Office of Student Affairs, and we sponsored the workshop at Window Rock High School which was mentioned. We invited some students from mission schools, B.I.A. schools, and public schools, from the reservation and border town schools like Winslow, Holbrook, and Gallup. In Winslow, there are some Navajo students and some Hopi students in the dorms, but they go to public schools. And the reservation schools' students live at home but go to a public school on the reservation. There are more Indian students in comparison with Winslow where there are more white students. The students at Winslow and Holbrook and Gallup are very competitive, outgoing and active, whereas the students on the reservation are shy, bashful, and not so active. What do you think seems to be the problem here? There's no ambition--from which one? Why?

Comment from Student in Audience

I think the reservation kids don't have much ambition because they're not competitive like you say it is in border towns, and they don't communicate with other people. They don't know any other thing except their own environment.

Comment by Calvin Kelly

Back to this thing about border town schools and reservation schools. It seems like these students who go to these schools in border towns interact with all these other races. They'd rather go that way than live on the reservation. They really don't feel like they have a need to go back to the reservation to help their own people because maybe they have got into a way of thinking; they just want to be like everyone else outside the reservation. Maybe students from the reservation get stuck in that way of life, the way in which they've been brought up; maybe that's the way they want to keep it. They may want to help, to go out to work. Studying and

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reading, you know, takes a lot of time, and maybe they don't want to take the time to do this.

My name is Wayne Taylor, and I'm going to school here, and I'm in a program with the Hopi Health Professionals Development Program. As you can tell by the title, this program is aimed at having the Hopi students trained for various health fields. Once I had a dream about becoming a professional in the medical field. When this program came along I took advantage of it; and I feel that I have a really good chance now of becoming what I want to become. I would surely like to see a whole lot of other seminars like this one because it means you have something behind you. Somebody's pushing you and trying to help you by bringing you to programs like this. Some students here are from Winslow. I would like to have the counselors form some more programs of this sort and get the students' reactions. I think, through student actions, they can help form some sort of program on their own in their high schools where they introduce health careers. All the high school people who are interested in these fields could go discuss these things, and maybe come up with a number of great ideas about getting into these fields, or obtaining other information that might really attract more Indians to this field.

My name is Nelson Begay, and I would like to introduce myself in Navajo. (Does so) I go to the university here and I always get nervous when I'm in front of a lot of good people, especially my own people, and all kinds of people from the United States. I think that there are a lot of things involved here that we're trying to talk about. A lot of people have to go through life not knowing themselves; and I think this is one of the major problems. I'm in the elementary program here in Education. I'm dealing with children; and we're beginning to find out that to be able to teach--to be able to be somebody--you have to have respect for yourself. This is what I'd like to stress very much. To be respected you must respect yourself first. To respect other people you have to know that the other people respect you. I've been here about four years now, and I didn't have all this counseling. I think we especially need more Navajos in the medicine field on the reservations. We need to have more Dr. McKenzie's from our own people to help in the medical field.

I've been sitting here for two days, and I have gotten a lot of ideas, and I'd like to hear some more from the younger kids from the high schools. It will help me and also it will help you. They always say in the old Navajo way, "When you do throw pollen off, then pray." A man standing in front of you--he throws the pollen and he doesn't expect everyone to laugh. That is the same as people giving you ideas and you listen. Whatever I say from here, I don't expect everyone to laugh; and if it lands it will grow a lot of pollen. They always say that stories, songs, and prayers are like watering the mind so that ideas grow. This is a way of teaching that I think is great. We're fortunate in a way that many years ago our forefathers' only way to learn was from oral education. Now you look at books, and this book contains a lot of information that would take our forefathers a long time to get together. Now you have so much information such as newspapers, and books. Take advantage of these things. We could have twice

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or triple the information through these books; and I just think I want to encourage you to use this information. They say that Mother Earth and Father Sky (when you see the rainbow) are speaking. You think it is beautiful; and while I'm standing here, I hope there is a rainbow that crosses our mind that says that these ideas are good. I hope you all talk to each other and understand--take it for what it is--and I wish you good luck.

My name is Isabel Jim, and I'm a Navajo, and I'm from Maryvale High School in Phoenix. I think that this conference has helped us a lot. I think it helped me a lot because when you go up to the hospital the white doctors don't care much about the Indian people when they have some problems. I think this is the time to take advantage of what we're learning, what we're trying to do, and to help our own people.

My name is Aurelia Habana, and I'm a Navajo, and I'm from Round Rock, Arizona. I came down here to learn some things about health careers and nursing. I really have got a lot of things out of it and I really do appreciate it.

My name is J.J. Sixkiller, and I'm from Maryvale High School. I'd just like to say something about the seminar here. I really think it's great and we should appreciate it because it brings to Indian people broader knowledge about the health careers that are really needed. I think we should get into the group about the health careers; we should go to the seminar and pay attention. It takes hard work; it takes just a lot of hard work just to get through for those of us who are still in high schools. We should take the subjects now that are needed, and I would like to see us have more health seminars. I'm kind of glad to have all of us to get together down here because it brings reservation people and city people together to see what each other is like. It's really beautiful because we are a beautiful people. We're proud and we're beautiful.

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HEALTH CAREERS

This portion of the handbook and report is information offered to students in mini-seminars about a wide range of health careers. Time did not permit coverage of all possible careers related to the delivery of health care, but an effort was made to present careers that included some Indian model.

PHYSICAL THERAPY

Facilitator: Dorothy Watson

What is physical therapy?

Physical Therapy is the treatment of disease or injury affecting the musculo-skeletal system.

How are these diseases or injuries treated?

Physical treatments are used such as massage, exercises, heat, hydrotherapy, cold electrical stimulation, and traction. These treatments are given only by a prescription from an M.D., D.O., or D.D.S.

What are some common disease entities and injuries treated by therapists?

Parkinsonism, C.V.A., cerebral palsy, spinal cord injuries, muscular dystrophy, multiple sclerosis, arthritis, orthopedic problems, such as sprains, strains, post fractures, post surgical procedures on the joints or muscles, burned patients.

Some of the equipment used by physical therapists include:

Crutches, canes, parallel bars, braces, wheelchairs, variety of weights, pulleys, whirlpools, ultrasound, diathermy, paraffin, hot and cold packs, A.C. and D.C. stimulation, cervical and pelvic traction units, hubbard tank and therapeutic pools.

Physical therapy modalities and techniques are designed to:

Increase circulation, reduce pain, increase strength, increase range of motion and endurance.

Educational requirements:

A four-year college education is needed from an A.P.T.A. accredited college after which one must take a state licensing examination in order to practice physical therapy. Master's degree programs are available and require a B.S. degree for entrance and usually require two years.

SPEECH AND HEARING

Facilitator: Ruth Jones (Graduate student in the field of Speech and Hearing)

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Master's in Hearing:

This involves working with people that have hearing problems anywhere from needing a hearing aid to deaf people. In the hearing part of it, one will do testing as well as some therapy. If you have an older person that has a hearing problem, you give them some lip-reading courses; and if you have somebody with a hearing impairment, you probably have to give some kind of language training.

Master's in Speech:

1. Language deals with any language deficit. There are mostly children in this area. However, stroke patients are involved, where one tries to return the stroke victim to their condition prior to the stroke.
2. Stutters
3. Voice problems (use voice badly)
4. Articulation, is where people don't say their sounds right (S and R sound problems). Young children usually have this problem and you work a lot with school-age children.

Job opportunities are good. One can find employment in hospitals, in public school systems; and at the moment public school systems particularly in this State, are expanding because there's a new law going into effect which says that all handicapped children have to have services; therefore, jobs are opening up. Public schools have to comply and they've never done this before. There are other job opportunities in rehabilitation centers and also state and federal centers.

Educational Requirements:

A master's degree in speech is suggested, and it takes about two years to accomplish with the completion of four years undergraduate in speech and hearing. Grants and scholarships are available to complete most programs.

OCCUPATIONAL THERAPIST

Facilitator: Ellen Gefter, O.T.

Occupational therapy could be defined as the use of a planned, purposeful activity to assist an individual to cope with a problem; to cope with physical problems, emotional problems, developmental problems and social problems.

We help others to help themselves. We try to have somebody to function as independent as possible. We work in the areas of activities of daily living; the sub-care activities are teaching people to feed themselves, dress themselves, groom themselves.

Work may be in the homemaking areas, in communication scale, in recreational areas, and in prevocational areas.

One must work under a doctor's prescription to try to restore and maintain someone's function, increase strength. Work involved is mostly with the upper extremities to prevent any deformities.

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Educational requirements for becoming a registered occupational therapist:

1. Four years college
2. Six to nine months of clinical experience
3. Leads to a B.S. degree in occupational therapy
4. National registration exam to become a registered therapist is required.

Also, there is a C.O.T. which is a certified occupational therapist assistant program requiring:

1. Two years college
2. Clinical experience
3. Leads to an associate degree, and as a C.O.T. aide you must work under a registered therapist.
4. There are also occupational therapy aides who receive on-the-job training.

Scholarships and loans are available for the college program. The need for occupational therapist is tremendous, both for males and females.

Personal requirements:

1. Desire to help the ill and disabled
2. Interest in medical and science field, as well as the creative and artistic field

VOCATIONAL EVALUATION

Vocational evaluation is one field in rehabilitation dealing with people who are handicapped in one way or another, who have to change jobs, who have some trouble finding their first job. A major concern is what is required for them to return to work or start to work.

Educational requirements:

The programs that are available in rehabilitation and vocational evaluation are now pretty much on a master's degree level. Basic requirements include four years of college in a variety of fields and then two years in vocational evaluation from a graduate school. These programs are relatively new. A few years ago most vocational evaluation workers came from a variety of fields; now there's like half a dozen different programs throughout the country that offer a master's degree in vocational evaluation. Employment prospects appear quite good. The program at the University of Arizona is the only one in this part of the country. Most of the others are in the Midwest or East. It is a very interesting field and requires that you really be interested in working and helping people.

REHABILITATION COUNSELOR

The rehabilitation counselor works with people with physical and mental disabilities, and usually they are severely disabled. The counselor uses

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the services of all other team members in helping clients find what they are able to do and want to do. Places of employment for rehabilitation counselors are in state agencies and local agencies, V.A. hospitals, other hospitals, rehabilitation centers, and a multitude of different areas in which you can work.

Specialization in, or within the field:

1. Work with drug addicts)
2. Work with the mentally retarded) or a little of everybody
3. Work with alcoholics)

Employment outlook is good. Pay in different states can start from $8,700.00 a year to $15,700.00 a year.

Educational requirements:

B.S. degree (in courses like psychology)

Minimal education requirement, but more and more emphasis is being put on a master's level.

It is possible to go on and receive a doctor's degree in rehabilitation counseling.

ALCOHOL STUDIES

Facilitator: Jerome De Wolfe (Sioux graduate student)

Rehabilitation in my opinion is new in the area of alcoholism. Alcoholics were generally dealt with by the city jail. Alcoholism is considered to be an illness. Hospitals and rehabilitative programs are now more active in the area.

Pertinent statistics:

Indians have a higher crime rate than any other ethnic group in the nation and the vast majority of the crimes are related to alcohol. Death rate due to cirrhosis of the liver is twice the national average among Indians....26.7 vs 12.1 per 100,000 total population. The difference becomes even greater because the Indian population is younger than the general population of our country. Deaths from homicide are about 16 per 100,000 for Indians and 5 per 100,000 for all races. Again, many homicides are related to alcohol (excessive drinking).

Many tribal leaders view alcoholism as a number one health problem. The Office of Economic Opportunity has funded programs on reservations to aid in the control of alcoholism. The Indian Health Service, or the Public Health Service labeled alcohol a high priority health problem. Many of the programs that are involved in the area of alcoholism are an attempt to get at the person's problem. Rehabilitate him back to society.

There are positions available that are being funded for working through the National Institute of Alcohol and Alcohol Abuse who are now

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funding programs to Indian agencies that deal with alcohol. Agencies are given priority who have all Indian staffs. They have a problem in that trained personnel are not available at this time.

Educational requirements:

This graduate program requires a bachelor's degree for admission.

The background may be in any area of your choice. Probably the most helpful area would be the behavioral sciences or biological sciences. But there are students in art and creative writing.

ALLIED HEALTH CAREERS

Providing health services, especially hospital care, requires a great number of skills that have job possibilities. Some possibilities are:

Clerical
Nursing - R.N. (registered nurse)
L.P.N. (licensed practical nurse)
Nursing assistant
X-ray technology
Operating room technology
Respiratory therapy (dealing with heart and lungs)
Opthalmic dispensing (preparing eye glasses, fitting and frames, fitting to patient)
Optical laboratory technician (makes glasses)
Dental laboratory technology (designing and preparing dentures)
Emergency medical technology (paramedics in fire departments and ambulances)

Educational requirements:

Training for these careers varies, sometimes involving on-the-job training. Time for training ranges from a semester to two or three years. Often a national or state examination is required for certification.

In most careers a strong science and math background in high school is to your advantage.

A good place for information about these careers are the community colleges and the Employment Assistance Program of the Bureau of Indian Affairs.

SOCIAL WORK

Facilitator: Betty Bitsue (a social worker with the Navajo Mental Health Program in Chinle, Arizona)

Handling the psychological and emotional problems of people is the major part of the job. A social worker must be able to recognize those persons who have problems and be able to help them with their problems.

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Aches and pains may be attributed to the psychological and emotional stresses which a layman is not able to detect.

If social work on the Indian reservation is to be effective, what is needed is:

1. More trained Indians in program planning and development.
2. Indians should have a voice in programs being developed and implemented on the reservation.
3. Native healing processes should be recognized along with the professional aspects in social work.

Educational requirements:

An undergraduate degree (four years) and an additional two years of graduate work are required before one becomes a professional social worker. For specialization, there is a doctoral program leading to a degree of doctor of social work. Course work in sociology and psychology for social work is usually augmented by courses in bacteriology, microbiology, and human diseases.

MEDICAL LIBRARIAN

Facilitator: Pat Bradley

A medical librarian is not a person who actually treats people but is on the edge of the medical career. She helps doctors, nurses, and who ever needs medical information. Medical librarians help find information through books, magazines, films and other sources pertinent to their work. Medical librarian focuses on one area of literature: the literature of medicine, nursing, and veterinary science. This contrasts with a regular librarian who works with all kinds of literature. It is very specialized in one area with certain standard titles. A lot of the material is computerized. A medical librarian often works with films and videotape rather than books.

I did not think of becoming a medical librarian when I was sixteen or seventeen years old. I happened to get into medical library work after my first teaching job. I really like my job in helping doctors and nurses use books and materials they need. I got my master's in library science here at the University of Arizona. It took me six years to complete my schooling. A medical librarian does not do a routine job. It is a good paying job. I travel and meet people who are doctors, nurses, and people who are important in the Indian Health Services. My degree enables me to give information they need. I don't end up endlessly shelving books in a library. I work for the Navajo Health Authority library. Our library is just now developing as a part of the future American Indian Medical School. We work closely with doctors and nurses in the Navajo area and with the Indian Health Services. Those are the people with whom we have the most contact. It is an interesting job. One does not have to take heavy science courses. I think science courses keep a lot of students from learning medical and health science careers; you write to the university and they say you have to have all of these: health science, physics, chemistry, and math courses. A medical librarian has to learn the language of different specialties of medicine, nursing, and veterinary science, but you can pick that up. I took chemistry

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in high school and I never took physics or statistics or a lot of other courses that are essential to other health science careers. So although you don't have to take these courses, they do help. I wish I had taken a little more science in my undergraduate program, but I wasn't planning to be a medical librarian at that time.

One difficulty is that there is so much information that much of it is being computerized and being put into information systems. You don't have to work with tons and tons of materials. I don't think there is a medical librarian program at the University of Arizona, but you can take another course of study called medical bibliography. This tells you the important books and magazines in the medical field. I didn't take that, but I learned it pretty fast. It's something to think about and it is a little bit different. The pay is good and the market isn't flooded with medical librarians. I'm the only one in my area that I know of. If you like working with people, it's really great.

Educational requirements:

There are two levels of medical librarianship and, therefore, two possible educational routes.

To be a medical records librarian is to be semi-professional, handling the filing of records. This requires a two-year A.A. degree in some junior college.

A medical librarian who handles reference materials goes to graduate school to get a master's of library science. In addition, another course must be taken in medical bibliography and this course is not available at all universities.

NUTRITION

Facilitators: Dr. Edward J. Sheehan, Associate Professor, Associate Nutritionist, School of Home Economics;
Mrs. Juanita Kavena, Cooperative Extension Service, Extension Agent-Home Economics

Food is essential to animal and human life. Eating the right kind of food in the right amounts is necessary both to maintain and to improve health. There are a number of possible careers built on this need: careers in planning meals for the family, for schools, for hospitals, and for special health problems. Also, industry and sales offer careers for research about foods. Where two different cultures come into contact, dietary patterns change and there is the unique need for discovering new diets that are nutritionally adequate. Educational programs through sch[illegible], radio, magazines, and newspapers need well-trained experts in nutr[illegible]ion to guide programs. Health problems typical of Indian populations such as obesity and diabetes need nutritional attention through special programs.

Animal nutrition is another important field especially in order to guarantee quality meats and dairy products.

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Educational requirements:

Strong science and math programs in high school are valuable for a bachelor of science program in the College of Agriculture. The Home Economics Department offers majors in food, human nutrition, and dietetics. The Agricultural Biochemistry Department has a program in agricultural nutrition. Science and mathematics are important in all the programs.

Graduate degrees are also offered.

GERONTOLOGY

Facilitator: Larry Curley (graduate student in gerontology at U of A)

There is a need for Indians in programs for the aged on Indian reservations, also a need for services in biological, administrative, and legal aspects.

For example, plans for housing for the aged should consider ramps, buzzers, and support bars in the bathrooms; and many other ideas which will be helpful to handicapped elderly people.

Statistically, Pima County alone has 57,000 elderly people. To give an effective service to the aged there is a definite need for trained personnel in the field of gerontology.

Educational requirement:

A master's degree in gerontology is best.

COMMUNITY HEALTH REPRESENTATIVES

Facilitator: Angelita Miguel, Training Officer, with the Indian Health Service at Desert Willow Training Center for Community Health Representatives

Description of the training program:

Training program is three weeks, which draws trainees from 24 different states.

Funds are provided by the Indian Health Services.

It provides trainees opportunities to investigate other areas in health. The training may persuade trainees to consider going back to college for more formal training in the area of their choice. Personal and family hygiene and proper nutrition are only two of many health practices which a health educator stresses for a more healthy environment.

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STATE COMMITTEES ON HEALTH ISSUES

Facilitator: Ron Moore, Director of Hopi Action Program, Oraibi, Arizona, and the only Indian member of Arizona State Committee on Aging (appointed by Gov. J. Williams to the 15-member committee)

Description of the committee:

The committee advises the Department of Economics Security of the problems of the elderly people, food program, nursing homes, home visitations, medical attention; these are only a few of the problems which the committee deals with.

The problems Mr. Moore states as critical on the reservations for the elderly are:

1. Food programs
2. Nursing homes and home visitations
3. Manpower shortage of trained personnel in planning and administration
4. Training programs on reservations must have professional expertise and adequate funding

PHARMACY

Facilitator: Mr. Howard J. Eng

What is pharmacy? What areas can you go into after you graduate? These are: community, institutional, Public Health Services, Indian Health Services, research, teaching, the Armed Forces, Quality Control. You need to do your internship, which is the supervised practical pharmacy experience obtained outside the classroom. It's like reading a book on how to drive a car. You do not usually know how to drive until you have actually experienced operating a vehicle. You need to constantly practice pharmacy before you get a degree. The State of Arizona requires 1500 hours of internship. Eligibility for internship does not begin until the completion of 30 units in the College of Pharmacy and application to the State Board including payment of a fee. Upon certification by the State Board of Pharmacy you may intern any place that has been certified by the State Board of Pharmacy for the training of interns. The federal and state law has to license the pharmacist to protect the public. They make sure that equipment is clean and working well. A registered pharmacist does not stop his education after he gets his degree. He must continue his education because new drugs are constantly put on the market. Job prospects look fairly good. Markets and demands are breaking even. Institutional pharmacists are limited to a certain point.

Educational requirements:

A bachelor of science in pharmacy is based on five years of college work. Two years of prepharmacy with an overall grade average of "C" is required for entrance into three years of professional school.

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NURSING

Facilitator: Mrs. Trudie Narum, nursing student (Jemez)
Dr. Agnes Aamodt, Associate Professor in College of Nursing
Mrs. Nona Deer, Instructor in College of Nursing

Nursing, as a career, offers each interested person opportunities to be of humanitarian service to people. The business of health is everybody's business, and the career of nursing touches nearly every aspect of daily living. The nursing field also helps the individual to derive satisfaction from expanding one's own perceptions, knowledge and skills. The opportunities for a successful career are vast, and unlimited.

Nurses are in great need among the native Americans whether it be in an urban or reservation setting. We may have better understanding of our people's needs whether they be scientific or cultural. The need may be communicating in the native language for better understanding and promotion of better health care for our people. We are also in a position to promote goodwill and better understanding of the Indians by others. Nurses work with all segments of the population, young and old, sick and well, physically and mentally ill, in hospitals and out, in all community settings, rural and urban, under a variety of governmental and private agencies. Depending on one's motivation and interest, an education in nursing can offer the individual the opportunity of expanding individual concerns while remaining sensitive to the needs of people, in general.

There are many areas in the nursing career to consider. The U of A nursing college graduates professional nurses with a baccalaureate degree. However, many other nursing careers are available. Among these are the licensed practical nurse, nursing aide, orderly, and attendant. All of these people work alongside the professional nurse in caring for the sick and in teaching people to stay well.

As a nursing student I suggest that each field of nursing be checked into thoroughly to see the advantages and disadvantages. If, however, you are interested in the baccalaureate program we suggest you start preparing yourself early, while you are still in high school. Some of the suggestions might include:

1. taking all science and math courses as these are a "must" in course requirements at the U of A
2. social sciences--psychology
3. If you ever have the opportunity to work in a hospital as a volunteer, or an aide, possibly for a summer job or after school, do so. This will give you a good insight into what nursing is all about.

Attached is all the information required for the U of A College of Nursing.

Educational requirements:

The College of Nursing requires 4 1/2 years (142 units). This includes 4 1/2 semesters of clinical practice. At the University of Arizona the

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faculty advises you during your sophomore year whether you may continue in clinical work, or not.

After receiving your degree you must still pass the state boards to be a registered nurse (R.N.).

A CAREER IN VETERINARY MEDICINE

Facilitator: Dr. Edward J. Bicknell, Animal Pathologist, Extension Veterinarian

Many young people interested in medical science are becoming interested in veterinary medicine because of opportunities and challenges in animal health work. The explosive increase in the world's animal and human populations makes it mandatory that qualified personnel be trained and available to prevent widespread animal losses from a vast number of disease-producing agents. The demand for veterinarians is growing rapidly. The numbers of students expressing a desire for a veterinary medical education is increasing at a rate exceeding the capacities of veterinary schools to accept them. Consequently competition for admission is extremely keen.

Standards for admission to a veterinary college are such that well above average grades are essential. At the present time the acceptance rate among qualified applicants is in the neighborhood of 1 in 4.

The state of Arizona does not have a College of Veterinary Medicine. In order to provide support to education in this area, the state has joined with others in the West to form the Western Interstate Commission for Higher Education (WICHE). Qualified students may attend school of veterinary medicine in California, Colorado and Washington without paying out-of-state tuition.

When nearing completion of pre-veterinary requirements the student applies for admission to a College of Veterinary Medicine. If accepted, the student must then complete four years of professional study at an accredited College of Veterinary Medicine. Courses include anatomy, physiology, microbiology, pathology, parasitology, surgery, medicine and many other related subjects. Graduates receive a Doctor of Veterinary Medicine (D.V.M.) degree and must pass rigid state licensing examinations given by the states in which they wish to practice.

Career opportunities for graduate veterinarians include general practice, specializing in either small or large animal practice or both. Research in government, industry, or at a university. Public health at the local, state, or federal levels. Regulatory medicine involving disease eradication programs and animal movement regulation. Laboratory animal medicine, zoo animal medicine, and military veterinary medicine. The profession includes many women veterinarians in all of its fields of endeavor.

For students interested in the care and health of animals but not necessarily in pursuing a career in veterinary medicine, programs are

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available that will prepare an individual for a career in the para-veterinary fields. At the University of Arizona, a four-year program is available leading to a B.S. degree in Animal Health Science. At the same time the student completes all pre-professional requirements for admission to veterinary schools in California, Colorado, and Washington. In addition, several animal technician courses of study are available at other schools.

Educational requirements:

A career in veterinary medicine, based on sound high school preparation in basic sciences, starts with college level pre-veterinary studies. These consist of courses specified by each of the nation's 19 colleges or schools of veterinary medicine. A minimum of three years preparatory work is usually involved, although a great many students are accepted for professional training after having earned a bachelor's degree. You should determine the specific pre-veterinary course requirements of the veterinary college you wish to enter. In general, all require biology, chemistry, physics, mathematics and courses in the humanities and social sciences.

For more information on requirements for an education in veterinary medicine and the related para-veterinary fields, interested persons should contact the Department of Veterinary Science, University of Arizona, Tucson 85721.

MEDICINE, OSTEOPATHY, AND DENTISTRY

Facilitators: Dr. Herbert K. Abrams, Family & Community Medicine
Dr. Steven S. Spencer, Family & Community Medicine
Ms. Vikki Stevens, Medical student (San Carlos Apache)

Becoming a doctor or a dentist is a hope many high school and college students hold. But moving from the hope to the reality of being a medical or dental student requires determination, good health, and good grades, as well as the type of personality that can take challenges and endure hard work.

There are two types of doctors or physicians who practice in the United States. The majority are M.D.'s, doctors of medicine, trained in medical schools while the remainder are D.O.'s, or doctors of osteopathy, trained in colleges of osteopathy. Both types of physicians practice basically the same way with a few exceptions and both, along with dentists, require the same educational background in college and high school. There is now and will continue to be in the future a great need for doctors and dentists. There is now and will continue to be in the future a great need for doctors and dentists. There are opportunities in most communities across the nation and especially on or near reservation areas.

Dental, medical and osteopathic schools are interested in female as well as male students and are particularly interested in admitting capable, well prepared Indian students because they are now recognizing the need for Indian doctors and dentists to care for their own Indian people.

Getting into these schools generally requires a B+ or higher grade average in college. There are no specific majors or fields of study

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required for pre-medical or pre-dental college students, but there is a requirement for at least 2 years of biology, 2-2 1/2 years of chemistry, 1 year of physics; some schools require 1 or more semesters of mathematics. (Specific requirements for any of the more than 100 medical schools in the United States and Canada can be found in a book at most large libraries: Medical School Admission Requirements; Dental School Admission Requirements.)

But even more important than courses in college is the preparation you get in high school because the high school preparation gives the background to do well in college. Once again, the courses necessary are at least 1 year each of biology, chemistry, and physics; 4 years of English; 3 years of mathematics, including two years of algebra and 1 year of geometry; and most colleges and universities suggest 1-2 years of a foreign language as well as social studies courses. Obviously, these are a lot of requirements and the courses are not easy, but if you get into the habit of studying and doing well it is much easier in college and in further education.

The kind of work doctors do varies widely. Most people are familiar with the family physician and surgeon but there are many other specialties such as pediatricians (children's doctors), obstetrician-gynecologist (women's doctors), neurosurgeons (brain and nerve surgeons) as well as many others. A doctor generally works long hours (50-80 hours per week) and frequently has night and emergency calls. Most doctors agree that while the work is hard and the training is long, the work is very rewarding and worthwhile. Helping people get well and stay well can be extremely fulfilling. Dentists' work is likewise interesting, varied and satisfying.

Briefly, if you have the idea that you might want to be a doctor or dentist, the time to start preparing is while you are in high school. Check with your advisor, talk to doctors and dentists, maybe even work in a hospital or clinic so you can get some knowledge and experience on your own. Most importantly, plan your courses so that you will be prepared as well as possible.

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THE UNIVERSITY

If you are interested in the University the following three areas will be of concern to you:

1. admissions
2. academic counseling in health careers
3. financial aids

Although the information pertains to the University of Arizona it is very similar to all other state universities. Specific inquiries could be sent to any of the universities, in care of the Dean of Admission, the Dean of Liberal Arts, the Financial Aids Officer, or the Dean of Students.

ADMISSION

by

David L. Windsor
Dean of Admissions & Records

I want to point out to you that these requirements have been set by the Arizona Board of Regents, and the admissions office of the University is the agency of the University which administers the admissions activities in the admissions program. First let me talk about the pattern of high school subject matter that is required for admission to the University. It happens that these are the same for all of the divisions of the University, all of the colleges within the University, that the health science students would enter. Many of the health science programs are in, or grow out of, the College of Liberal Arts, and you will hear a little later from Dean Boller about that college. They do not all, however, fall in that college. Nursing of course is a separate college from the freshman year on. If you are interested in speech pathology you would enter the College of Fine Arts. If you are interested in veterinary medicine you would enter the College of Agriculture and if you are interested in nutrition programs you would enter the School of Home Economics. The admission requirements apply to all of these several divisions that might be involved--liberal arts, fine arts, nursing, home economics or agriculture.

What are the requirements established by the Board of Regents for admission? There are several alternatives, actually. The first requirement is that you be graduated from high school in the upper one-half of your class. If there are 250 students you must be in the upper 125, if you are entering by that requirement. An alternative to entering on the basis of rank in class would be to enter on the basis of test scores. And the testing used in this state is the A.C.T., The American College Testing program. This is a test given five times a year throughout the country. Most of the Arizona high schools give the test at least four times a year. It's a battery of tests in four general areas; a measure of your aptitude and achievement in English and communication skills, mathematics, social studies and the sciences. Your counselors have probably made you acquainted with this testing program which consists of four tests--each scored separately. Your score ranges from 0 to 35. You add up your four scores and divide by four and that gives you a composite score. The Board of Regents ruled that an Arizona

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high school graduate to enter the University, if he is entering on the basis of his test scores, must have a composite score of 21. Now what do you do if you are not in the upper one-half of your class and do not earn an A.C.T. score of 21? There still are some alternatives for you. Your case then would go to the Admissions Review Committee, a faculty committee appointed by the President of the University to consider applications to the University from people who do not meet either of the first two requirements. If you have an overall grade average of 2.5 on a 4.0 scale--4 being high--you still might be considered. If you had strong letters of recommendation from your counselor or principal saying that in his judgment John Smith, although he did not have the high grades to be in the upper one-half of the class and did not score well in the A.C.T., he is still confident that you could handle the academic demands of the University, you still might be admitted. Another alternative would be to take 9 units of evening or summer study in the University or at a community college, and then come in on the basis of that record. So there are alternatives if you don't meet the grade average or rank in class or test score requirement.

I should mention also that the Board of Regents have established a pattern of subject matter that you must complete in high school before you can enter the University. It's probably nothing other than what you have already been studying if you are planning to go on to college. Your counselor probably has advised you to carry this program. But your four years of high school credit must include either four years of English, or if you study a foreign language you must have two years of a foreign language and then you need only present three years of English. You need two years of college preparatory mathematics, either 1 year of algebra and 1 year of geometry, or occasionally a student will skip the geometry and present two years of algebra. You need the social studies that are required for graduation, American History and Social Studies usually called American Problems. You need a year of laboratory science. The rest of your program then can be electives. The University requires 16 units for admission; however, most of the Arizona high schools require 20 for graduation so that takes care of itself.

Now what is the admissions procedure? If you want to apply to the University of Arizona in the late fall or early spring of your senior year you should be doing three things. The earliest thing you should plan to do is make arrangements through your counselor to take the American College Test--the A.C.T. The second thing you should do is send in a University of Arizona admission application blank, and these forms are in every high school in the state. The principal and the counselors have a generous supply of these. We furnish them directly to the high school each year. If you wrote our office we would send you one by return mail. However, you don't need to do that because your high schools all have them.

Then you request your high school to send us a high school transcript. The most common procedure is to have your transcript sent at the end of the first half of the senior year. Sometimes students want to know earlier than that and we frequently get a transcript at the end of the junior year. If it's a strong record we can admit you then, or at the end of the first half of the senior year. We can admit you at that time subject then to the final transcript coming in after graduation. If you are qualified on the preliminary transcript you will be notified of your acceptance and then we ask that follow up transcript be sent after graduation giving us your

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grades for the spring semester including the statement of graduation. Once you are admitted you will be sent other information about the opportunity. It's an option if you wish to do so, to come to the campus in the summer for orientation and preregistration. Only about 20% of the freshmen elect to do that because they have summer jobs or they live so far away that it isn't practical. But there is that opportunity. Similarly then, in late August, there is again a regular orientation and registration for the fall semester.

I have rather rapidly covered the subject matter requirements for admission, the quality of work or test performance that is required for admission, and the several steps--three of them--that you must take to make formal application for acceptance to the University of Arizona. Other than that, I hope that many of you are considering the University of Arizona as a place where you might like to study as you complete high school.

UNDERGRADUATE YEARS

by

Mr. Dan Boller
Health Careers Counselor
and
Assistant Dean, College of Liberal Arts

I intend to combine the interests in form of a report to you on the interim period that is approximately of four years' duration which exists between high school, the point where the majority of you are now, and medical school, dental school or some of the professional schools which require four years of undergraduate work. The importance of these four years is not to be underestimated by any means. They're very formative years of maturation for each of you as an individual. You will continue to understand what life is and your personal perspective will gradually clarify your role in this world, in short, simply a clearer picture of yourself. It is a period of decision, for example, your academic study options and your career options. The decision-making process is important in itself, unless you carefully develop it (giving some thought to this analytical process) you may be defeating yourself simply because of what you don't know--either what your academic options are or what you career options are, and the decision, of course, simply put, is an act of making up your mind.

Once you're here at the University, one of the more important decisions will be that of selecting a major field of study. We have competent people who can aid you in arriving at this decision. A second decision which must inevitably arise is the one related to an assessment of your progress in the program of study which you have selected. The general interests of all of you is oriented toward medicine, dentistry, or any of the allied health services. We had some recent figures which indicated that there were 2.75 million individuals engaged in areas allied with health. Yet the demand is insistent for more and more trained individuals, particularly in the areas of dietetics, medical records, medical technology, and physical therapy. The opportunities open to you are almost without limit. But, returning to decision, a major assessment of progress in an academic program may be made on basis of your own level of interest, in the subject matter.

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Chemistry, for example, is basic to many of the courses. How well are you doing, what are your grades for the semester? What is the result of discussions with the professors on your work in the lecture or laboratory? And feasibly, of course, be certain that any program you select falls within the perimeters of the tribal needs in the health fields.

Now that I've mentioned chemistry, let me set forth some guidelines for your individual academic program. Health service fields like nursing, physical therapy, dentistry, and medicine have a basic and minimum set of requirements. We're fortunate to have a medical school here at the University, for people interested in medicine. Course requirements for the U of A Medical School include one year of freshman English, one year of inorganic chemistry, one year of organic chemistry, one year of biology, one year of physics and one year or more of math. There is a systematic procedure of progress through any series of courses you may select, and there is no fixed starting point in these series. I, as an academic advisor, would take into consideration your mathematics background in high school, in the first place, determine your initial course in math here at the University, and also to determine when you are ready to initiate work in chemistry. Without a solid working knowledge of intermediate algebra, which is roughly your second year in high school, algebra should not be in a beginning inorganic chemistry course. Inorganic chemistry is a pre-requisite for continuing study in chemistry which is a prerequisite course for beginning work in biological sciences.

For those of you that are interested in some of these schools, there are national exams which must be taken. The MedCet, which is one of the variables taken into consideration for entrance into medical school. On this examination for medical school, organic chemistry makes up 50% of the science portion. Unless an individual knows organic chemistry which has a background of math and inorganic chemistry; there just isn't any way that a student will do well on that exam. So these factors have to be tried together, and careful consideration given to them in planning your initial year on campus.

FINANCIAL AIDS

by

Mr. Dale E. Guy
Assistant Indian Student Advisor
and
Financial Aids Office

We are going to talk about financial aid, which is very important to all of us. Financial Aid is difficult to understand and difficult to explain because no two people in this audience have the same financial situation. Furthermore, it is unique to the Indian people because certain situations involve the federal reservations where you may live.

The applications that we have for financial aid are complex and there are two applications required for Indian students. The ACT Family Financial Statement is recognized at any university and college in the State of Arizona. The Bureau application is also required of you and the standard

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procedure is to apply through your local agency of the Bureau of Indian Affairs for Bureau consideration. This application is only for consideration; it's not the actual award itself.

The second step is to apply through the university or college that you plan to attend. If you plan to go out of state, you'll have to write to the respective college to get the application because it may be different from any used by the colleges or universities in Arizona.

The actual funding procedure starts at the University after the evaluation of the financial need has been made. Now, the application is difficult to understand in some cases because it involves income tax information, real estate, stocks, bonds, assets, and what have you. My experience in working with the Indians in Arizona revealed that all of the information just isn't available to them. Answer the questions the best that you can. High school counselors and local tribal coordinators are called in to state financial aid meetings and given information. The application, for instance, will ask for the value of the home. If you live on the reservation you have a home but it really has no value per se. You really can't sell it, but it's yours to live in. Information like that is kind of difficult to understand if you don't have any help; and the important item that I want to leave with you is that you should ask questions, not only of me, but of the people at the local tribal levels and at the high schools.

Every college has a set budget and no student can receive funds above that certain amount. Only in extreme situations like in death, extensive medical expenses, or accidents can a financial aid officer recommend Bureau or tribal assistance above that amount.

Another thing that isn't taken into consideration is the extended family that so many Indian families have. The standard college budget is a set amount and it's related to direct educational expenses. Now, we find people who owe Penney's, who owe Texaco for gasoline, Wards, Sears. We normally do not take these situations under consideration, and we do not give a student enough money to pay off his debts while attending school. This doesn't happen.

When you file the financial aid application at the University and such complication pertains to your situation, submit a letter with that application explaining it. Some of the forms we get are incomplete, so we have to assume a lot of things. When we do that, we do make errors in some student situations. The application itself is complex and it's made in such a way that it discriminates against high income people. Don't assume that such families are going to get more money because they have a little more tribal pull than you do. Some of the families that you have lived next to may not have as much money as you think they do. Some of them that have things may not have as much money as they said they did. So, leave the evaluation process to the University and, by all means, you'll get a fair shake by going this route. Some students feel that they should apply strictly through the local and tribal agencies for Bureau assistance only, and that B.I.A. will take care of their needs. That is not true. Applicants must go through the University. The amount of financial aid that a student gets comes from a person such as myself after I sit down and look at your folder. Then I say, this person needs "X" amount of dollars and we send a special letter to the B.I.A. area office and they fund according to our requests.

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I've given you a few examples of the funding procedure. Again, we want you to ask questions about it. If you get an award from a tribe or from the University and you are not sure about it, and it's not enough money, go in and ask about it. Find out why it happened the way it did. We have found some students who haven't received anything at all. We know of instances, at some of the local levels, where the student's application was misplaced by a secretary who didn't like their family. So this sort of thing happens. We find people who can't get a response from an office at the local level so they go out and pick up their tribal representative, go down to the scholarship office and directly secure the money to go to school on.

One application I would like to have you all apply for next year is the Basic Educational Opportunity Grant form. It's separate from our regular financial aid form. I want to impress upon you that this is the first application that we want you to fill out; the second would probably be the Bureau application, at your local level; and the third would be to fill out the standard financial aid form for this University. The majority of the cases for whom these forms are done involves free money--no loans involved. So that means you don't have to pay anything back.

EVALUATION

Every participant was mailed an evaluation form with a number of questions. Our return rate was just over 25% and comments covered the entire range of activities in the two-day seminar.

The evaluation is separated into three sections, five out of eight questions required are in Section I; while three questions gave the students a chance to comment in more detail and make suggestions for future seminars. These are in Section II. A third section reflects comments made by counselors and adults who came with the students.

Students had a chance to suggest additions to the seminar if they were to attend again. We have put the answers in general categories with those most frequently suggested first:

1. Cover more fields of health and have more workers already in the field, for example, family planning, first aid, medical assistants and practical nurses.
2. More time for small discussion groups among students and facilitators.
3. Put students with their own high school groups instead of separating them.
4. More time in each small seminar and add an extra day.
5. Have a chance to get acquainted first.
6. Have a chance to attend lectures and labs and see how equipment works.
7. Include films, more experiences of students presently attending colleges.

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Evaluations - Section 1

The following tables showing fixed responses to questions repeat numerically the value of the seminar to the participant. There was an overwhelming enjoyment in the seminar and an interest in coming to future seminars. A slightly smaller number indicated they had acquired some ideas for the seminar about their educational future. Approximately 1/3 of the participants had decided they would like to attend the University of Arizona, a few would not choose this university and about 1/2 were still undecided on subjects 6 and 7. Did you enjoy coming to the seminar?

Yes	75
I guess so	2
I'm not sure	2
No	1
No answer	6

Would you encourage others to come to such a seminar?

Yes	70
I guess so	8
I'm not sure	1
No	0
No answer	7

In response to which health career the student was interested in, we received the following:

Rank	Career	No. Interested
1.	Nursing	22
2.	Social Worker	7
3.	Special Education	5
4.	Veterinarian	5
5.	Surgeon	3
6.	Rehabilitation	3
7.	General Physician	3
8.	Radiology	2

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Rank	Career	No. Interested
9.	Medical Records	2
10.	Dentist	2

The following ranks have one response each:

Neurology

Pharmacy

Psychologist

Medical Research

Dental Assistant

X-Ray Technology

Social Psychology

Music Therapist

Protective Services

Counselor

Geriatrics

Pediatrics

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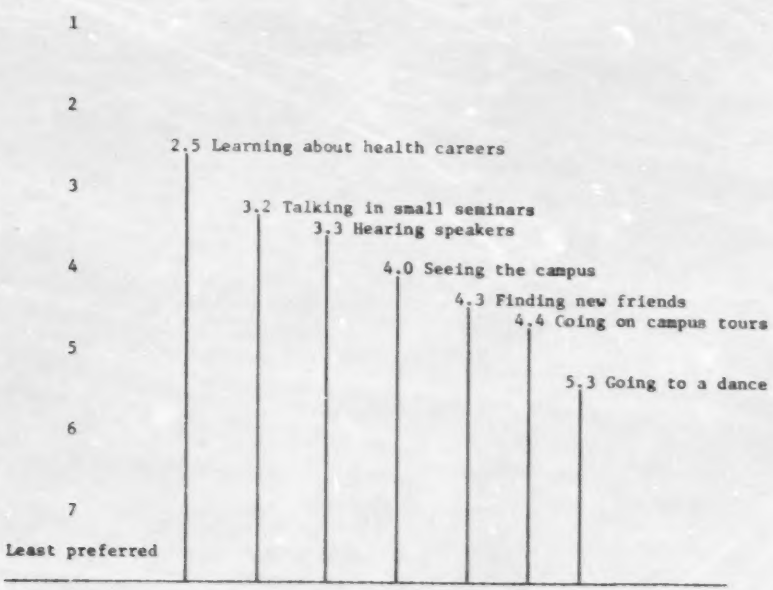
The following evaluation of preferred activities shows how very seriously Southern Arizona Indian students are weighing career considerations. The students ranked activity preference from 1 (high) to 7 (low). The averaged responses show the following ranks:



COUNSELOR COMMENTS

The comments made by counselors concerned many aspects of the Ned Hatathli Seminars. Positive responses focused on the speech of Dr. Taylor McKenzie. The mini-seminars were well received. Time allotment was felt to be reasonable and the idea of moving groups also met with counselor approval. At times the mini-seminars were too large due to the tendency of students to want to be with friends. Entertainment received good marks, though more participation could have been an improvement. The tours were considered short and also too poorly publicized to be effective.

Suggestions for future seminars centered around fewer speeches and more emphasis on seminars, points of reference from which students could evaluate speakers, biographical sketch of speakers for prior distribution, possible viewing of suitable films in each of the health careers and the increase of Indian professional participants.

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